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by Sam Merwin Jr.



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ADDRESS

Dynamic Science Fiction

Cover by Milton Luros

ROBERT W. LOWNDES, Editor.

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THE HEAT'S ON

By Clyde Woodruff



They stared, in mute horror, at the body



**In the future, men will still hate and will
still do murder. New ways will be invented.
Like burning a man to death over the phone**

Dear George:

Well, it's practically over now, the legalities, anyway. The county coroner left shortly after midnight, about an hour ago, and Wechsman and I returned to the inn. Dr. Baumes is spending the night on the hill. We're to meet again at ten this morning, and I suppose I ought to get some sleep before then, but I'm so wound up now I think I'll try to get this letter off. I hope it will approximate the detailed, accurate account you asked for. By the time I left the laboratory, some of the thermopiles were registering wild heat radiations from my brain, so if this reads a little exhausted, please remember my delicate condition.

Of course, I wasn't prepared for

what I found here. You were so vague and excited the first time we spoke that, in spite of the fact that I soon began to understand why, my initial reaction was to doubt whether anything had happened that would be worth making the effort to get here.

In your golden clime they see weather like this only on movie sets. It was snowing for the sixth consecutive day when I came up yesterday, and I still don't know how I made it. There must have been fifty abandoned cars in huge drifts along the stretch from Montpelier to Oakville. When I hit Fannersburg the highway patrol stopped me, and I spent an hour trying to think of something to say that would conform to the few facts I had—I was told they were checking—and

still sound sufficiently urgent for troopers on snowshoes to let me go on. Finally I decided to telephone the bill, hoping there'd be someone at the place who knew me and could maybe put in a word with the patrol. Well, Sheriff Latham answered and that did it. That was also the first I knew that Germaine was dead. When I told Latham you'd called from the coast to make certain I'd get to see Germaine, he said, "Hell, he should've called three days ago. The professor's been dead that long, at least."

All the way from Fannersburg I wondered why you hadn't told me. All you'd said, remember, was that Germaine had had a serious accident at the laboratory. It never occurred to me that you didn't know. It just became part of a developing mystery.

Oakville was so deep in snow that I expected to be greeted by dogs with brandy, but as a matter of fact I was hardly greeted at all when I got to the inn. Latham had said he'd meet me there because I'd never make the hill in my car. He wasn't there, but half the people in town were—naturally enough, I thought, with almost every other place in town closed, including McCord's—and it wasn't until I started to talk to one or two I knew well enough to shake hands with that I began to feel the frost had followed me in.

Later, when I came down to the inn for dinner, old man Haines confided he was mighty glad to see I hadn't been taken by the police. It turned out Latham had left word of my coming, and all and sundry at the inn were officially advised against any mention of the events on the hill. I suppose his motive was simple enough, but the result was a hardship for all concerned. Hardly a soul dared talk to me for fear that the conversation might take an unmanageable turn, and

I, aware not only of this widespread reluctance, but of a conspiratorial undertone that would have been ridiculous if it had not already un-nerved me, retired to a lonesome beer at the bar. Even when Latham appeared soon afterward—soon enough to make me think someone had phoned him the moment I arrived—he just sounded his siren briefly outside instead of coming in.

I WENT out, we shook hands and exchanged howdy's, I climbed into his winterized jeep and off we went. There was plenty of weather to talk about, but after a few minutes of it I asked him if I'd heard him correctly over the phone.

"Can't say," said Latham. "I was at the other end."

"I mean about Professor Germaine's being dead," I said.

"Oh, he's dead, all right."

"Three days?" I said.

"Coroner's got to decide that," said Latham, "and he ain't been yet. Body wasn't discovered until yesterday."

"Why was that?"

"I didn't look until yesterday," said Latham.

"You discovered it?"

"Hell, yes."

"Where was it?"

"Home."

"Well, what did he die from?"

"Coroner's got to decide that too."

"But surely there were indications of something?"

"Hell, yes," said Latham, and that ended it.

We were twenty minutes reaching the bridge. Long before we'd come to it there had been snatches of shouting and laughter in the wind, but it wasn't until we started across that I realized, quite suddenly, that there were kids skating the river at Nordersen's bend

—the one that turns wide around the hill and makes it almost an island. If I hadn't already known Germaine was dead, I think perhaps I'd have known it then. No one had skated there in the four winters since his laboratory tower had appeared on the summit of that hill to command the countryside.

Presently the tower itself was visible, as granitic and forbidding as a tombstone.

The old house was beautiful. Surrounded by frost-heavy evergreens, with icicles like dragon's teeth hanging from the leaded windows, its wind-swept northern side traced with bare vines and the south lost in snow to its eaves—more winter-bound than I had ever seen it—it was as warm and cheerful as the sound of sleigh-bells. One might have thought this house had known no changes but those tenderly bestowed by the slow passage of time, and yet a slight difference—so slight it was remarkable it made a difference—was already apparent: it amounted to the fact that there were cars parked in the driveway. One was Doc Berringer's and another was Bev Williams' taxi, but the third was a stranger's, with a bronze Federal shield and a D.C. license plate. The Doc and Williams were both waiting on the porch with Mrs. Howe as we drove up, and they met me with a fair approximation of the cordiality I'd always known as an old neighbor. Mrs. Howe kissed me and asked for you.

"He's fine," I said. "He sent his love."

"Did George really ask you to come?" she asked.

"Last night. I spoke to him."

Latham cleared his throat and said, "Now, then."

"It's a perfectly innocent question, Samuel," said Mrs. Howe.

"Didn't say it wasn't," said Latham.

"You won't be offended, Clyde," said Mrs. Howe. "It isn't Mr. Latham's doing. There's someone here from the F. B. I. who doesn't want us to discuss—"

"Heck, no," said Latham. "Mr. Woodruff understands."

"Of course," said, though of course I didn't.

WE TURNED to go into the house then, and I found myself wondering what there was about our conversation that had somehow sounded so wrong to me. It felt wrong, but after all, what had I expected? Profound mourning? Hardly. Mrs. Howe seemed very well composed, perhaps, but this was not unusual for her, as I knew, even under the most bitter circumstances. A lesser soul might have found life as housekeeper to Germaine an unbearable trial, but she had a quality that was beyond his reach on his most iron days. Or almost beyond—which made it almost unpainful.

Thinking about it as I followed Latham inside, I forgot about the front door and lunged back to catch it. I missed and it slammed shut with an enormous wham! that bounced off the walls and went echoing through the quiet house.

Mrs. Howe called back: "It doesn't matter any more, Clyde."

And there it was, you see. It wasn't alone the fact that Germaine's name had not yet been mentioned—Latham's presence might have accounted for that—but the truth was that Germaine had figured only inferentially in what we'd said, until the slamming of the door had provoked a direct reference to him. Understanding it didn't make it seem any the less wrong; I regretted it but I agreed it didn't matter any more.

Latham had meanwhile dispatched Bev Williams to the tower, and he hustled back with a message that we were awaited. Only Latham and I went. The others returned to the library, where an unfinished chess game waited on the large desk.

The door from the back of the house to the tower was open. Its lock had been forced and the heavy oak paneling was badly splintered. We climbed the stairs to the laboratory door, and after Latham rapped a couple of times without getting any response, he pushed open the door and we went in.

The laboratory seemed as immense and desolate and bound in vast silences as ever. All of Germaine's equipment stood in good order, the metal and bakelite surfaces dusted and spotless, every dial gleaming. I tried to see if I could find anything added since I'd last been there, but the mysterious array of machines and bright gadgets had never been sufficiently meaningful to provide a present basis for comparison. At the far end of the lab, where the horizontal bar of its *L* shape leads to the inner office, however, there was something even I could be sure was new. This was the booth—or chamber, as Wechsman insists it be called—I tried to describe over the phone. It looked like nothing so much as a huge, well-constructed box, six by six by ten feet high, of polished pale wood, with a foot-square window of thick glass on the side facing us.

As soon as we saw it, and spotted Wechsman inside, a reverse-hinged flush door opened soundlessly and he came out. I didn't remember him until he reminded me, "Wechsman, Alexander Wechsman, from the Peerless Precision Instrument Company." "Why, of course," I said, "it's the man from the vox-popper!" "Audivox," said Wechsman, with that little pained

smile of his. "I'm sorry we're meeting again under such tragic circumstances."

At this point, Ferrari, the F. B. I. man came out of the inner office, nodded pleasantly in lieu of an introduction because he didn't want to interrupt Wechsman, and joined us.

"How is Dr. Purcell these days?" Wechsman was saying.

"Fine," I said. "Very busy."

"Teaching, isn't he?" said Wechsman.

"Yes, at U. C. L. A."

"How does he like it?"

"Oh, fine."

"That's good. Well, remember me to him, will you, Mr. Woodruff?"

I SAID I would and turned to Ferrari. He smiled and stuck out his hand. "Mr. Woodruff, I'm Anthony Ferrari—Federal Bureau of Investigation, as you may have heard," he smiled again. "I understand Dr. Purcell asked you to come here."

"Yes, he telephoned late last night."

"About how late, may I ask, Mr. Woodruff?"

"Just past three A. M."

"Hell of an hour," Ferrari sympathized. "Still, come to think, that would be only eleven on the West Coast—he called from the Coast, you say?"

"From Los Angeles."

"Badly upset by the news, I imagine."

"Naturally."

Ferrari smiled interestedly. "Why the hesitation, Mr. Woodruff?"

"The truth is," I said, "I'm beginning to wonder if Dr. Purcell knows the professor is dead. At least, I can't recall that he said anything about it."

"That's odd," remarked Ferrari. "What did he say?"

"That Germaine had had an accident in his laboratory."

"Just an accident?"

"I believe he said it was a serious accident."

"And he asked you to come...."

"To find out what had happened and call him back."

"The details of the accident, you mean?"

"I suppose so."

"Rather a roundabout way to find out, isn't it?" Ferrari said, looking politely quizzical. "You'd think he might have called here directly."

"As a matter of fact, I assumed he had."

"Assumed? Didn't he say?"

"I don't think so."

"You don't remember?"

"Frankly, Mr. Ferrari, it was a difficult conversation in many ways. For one thing, Dr. Purcell wasn't altogether coherent, and for another, I was hardly very alert at that hour." After a pause in which Ferrari silently frowned and shook his head, it occurred to me to ask, "But if he didn't speak to anyone here, how did he know something had happened to the professor?"

"It seems to be a mystery, doesn't it, Mr. Woodruff?"

"Apparently," I said.

Ferrari smiled faintly. "You sound annoyed."

"I don't like mysteries particularly."

"Mr. Woodruff, I assure you I like them even less."

"Then perhaps you'll tell me what this is all about?"

"I'm sorry. Will you follow me, please?"

Without another word he turned and led the way into Germaine's inner office. The huge west window was blazing with the afternoon sun, and for a few moments I was blinded by the sudden brilliance. I felt a warmth in that small room that the laboratory

itself had been unable to provide, and gradually, as I made out the white-sheeted form on the long conference table across the room, I had a fleeting impression that it was really a snow-bank that had somehow managed to come through the plate glass window. It was as if the semi-wilderness outside, from which Germaine had accepted nothing but stillness and seclusion, had now, with his death, found a way to enter the house, if only through an illusion compounded of sunlight.

I followed Ferrari to the table. He raised the sheet and held it until I turned away.

Germaine had been burned to a crisp. His features were almost unrecognizable, and his gaunt, narrow-boned frame had been reduced to blackened and brittle scoria, but even the shocked, perfunctory glance that was all I could give to that fearful sight was enough to tell me that no ordinary fire or flame had caused it. I wanted to look but the faint odor of stale ashes burned into my eyes and I let them close and turned away.

Presently I said, "How did it happen?"

"We don't know, Mr. Woodruff."

"But you must know something?"

Ferrari nodded. "I'll show you."

WE WENT out and found Latham leaning against the chamber, his head poked inside its door, talking to Wechsman, who had evidently gone back in to resume whatever he'd been doing. "—like them bunkers they used flame-throwers on," Latham was saying. "Seen 'em in newsreels, ain't you?" Wechsman mumbled something and a moment later he appeared at the door.

Ferrari said, "Mr. Woodruff would like to have a look."

"By all means," said Wechsman, backing in again.

Continued on page 31.

(illustrated by Paul Orban)



Juth clasped the star-man's arm with one hand, while her other arm gripped his waist. The generator in Jorun's skull responded to his will... they rose quietly and went slowly seaward...

"Look around you, Jorun of Fulkhis. This is *Earth*. This is the old home of all mankind. You cannot go off and forget it. Man cannot do so. It is in him, in his blood and bones and soul; he will carry Earth within him forever."



THE CHAPTER ENDS

Novelet of Latter Years

by Poul Anderson

"**N**O," SAID the old man. "But you don't realize what it means," said Jorun. "You don't know what you're saying."

The old man, Kornt of Huerdar, Gerlaug's son, and Speaker for Solis

Township, shook his head till the long, grizzled locks swirled around his wide shoulders. "I have thought it through," he said. His voice was deep and slow and implacable. "You gave me five years to think about it. And my answer is no."

Jorun felt a weariness rise within him. It had been like this for days now, weeks, and it was like trying to knock down a mountain. You beat its rocky flanks till your hands were bloody, and still the mountain stood there, sunlight on its high snow-fields and in the forests that rustled up its slopes, and it did not really notice you. You were a brief thin buzz between two long nights, but the mountain was forever.

"You haven't thought at all," he said with a rudeness born of exhaustion. "You've only reacted unthinkingly to a dead symbol. It's not a human reaction, even, it's a verbal reflex."

Kornt's eyes, meshed in crow's-feet, were serene and steady under the thick gray brows. He smiled a little in his long beard, but made no other reply. Had he simply let the insult glide off him, or had he not understood it at all? There was no real talking to these peasants; too many millennia lay between, and you couldn't shout across that gulf.

"Well," said Jorun, "the ships will be here tomorrow or the next day, and it'll take another day or so to get all your people aboard. You have that long to decide, but after that it'll be too late. Think about it, I beg of you. As for me, I'll be too busy to argue further."

"You are a good man," said Kornt, "and a wise one in your fashion. But you are blind. There is something dead inside you."

He waved one huge gnarled hand. "Look around you, Jorun of Fulkhis. This is *Earth*. This is the old home of all humankind. You cannot go off and forget it. Man cannot do so. It is in him, in his blood and bones and brain and soul; he will carry Earth with him forever."

Jorun's eyes traveled along the arc

of the hand. He stood on the edge of the town. Behind him were its houses—low, white, half-timbered, roofed with thatch or red tile, smoke rising from the chimneys; carved galleries overhung the narrow, cobbled, crazily-twisting streets; he heard the noise of wheels and wooden clogs, the shouts of children at play. Beyond that were trees and the incredible ruined walls of Sol City. In front of him, the wooded hills were cleared and a gentle landscape of neat fields and orchards rolled down toward the distant glitter of the sea: scattered farm buildings, drowsy cattle, winding gravel roads, fence-walls of ancient marble and granite, all dreaming under the sun.

He drew a deep breath. It was pungent in his nostrils. It smelled of leaf-mould, plowed earth baking in the warmth, summery trees and gardens, a remote ocean odor of salt and kelp and fish. He thought that no two planets ever had quite the same smell, and that none was as rich as Terra's.

"This is a fair world," he said slowly.

"It is the only one," said Kornt. "Man came from here; and to this, in the end, he must return."

"I wonder—" Jorun sighed. "Take me; not one atom of my body was from this soil before I landed. My people lived on Fulkhis for ages, and changed to meet its conditions. They would not be happy on Terra."

"The atoms are nothing," said Kornt. "It is the form which matters, and that was given to you by Earth."

Jorun studied him for a moment. Kornt was like most of this planet's ten million or so people—a dark, stocky folk, though there were more blond and red-haired throwbacks here than in the rest of the Galaxy. He

was old for a primitive untreated by medical science—he must be almost two hundred years old—but his back was straight, and his stride firm. The coarse, jut-nosed face held an odd strength. Jorun was nearing his thousandth birthday, but couldn't help feeling like a child in Kormt's presence.

That didn't make sense. These few dwellers on Terra were a backward and impoverished race of peasants and handicraftsmen; they were ignorant and unadventurous; they had been static for more thousands of years than anyone knew. What could they have to say to the ancient and mighty civilization which had almost forgotten their little planet?

Kormt looked at the declining sun. "I must go now," he said. "There are the evening chores to do. I will be in town tonight if you should wish to see me."

"I probably will," said Jorun. "There's a lot to do, readying the evacuation, and you're a big help."

THE OLD man bowed with grave courtesy, turned, and walked off down the road. He wore the common costume of Terran men, as archaic in style as in its woven-fabric material: hat, jacket, loose trousers, a long staff in his hand. Contrasting the drab blue of Kormt's dress, Jorun's vivid tunic of shifting rainbow hues was like a flame.

The psychotechnician sighed again, watching him go. He liked the old fellow. It would be criminal to leave him here alone, but the law forbade force—physical or mental—and the Integrator on Corazuno wasn't going to care whether or not one aged man stayed behind. The job was to get the race off Terra.

A lovely world. Jorun's thin mobile features, pale-skinned and large-eyed,

turned around the horizon. *A fair world we came from.*

There were more beautiful planets in the Galaxy's swarming myriads—the indigo world-ocean of Loa, jeweled with islands; the heaven-defying mountains of Sharang; the sky of Jareb, that seemed to drip light—oh, many and many, but there was only one Earth.

Jorun remembered his first sight of this world, hanging free in space to watch it after the gruelling ten-day run, thirty thousand light-years, from Corazuno. It was blue as it turned before his eyes, a burnished turquoise shield blazoned with the living green and brown of its lands, and the poles were crowned with a flimmering haze of aurora. The belts that streaked its face and blurred the continents were cloud, wind and water and the gray rush of rain, like a benediction from heaven. Beyond the planet hung its moon, a scarred golden crescent, and he had wondered how many generations of men had looked up to it, or watched its light like a broken bridge across moving waters. Against the enormous cold of the sky—utter black out to the distant coils of the nebulae, thronging with a million frosty points of diamond-hard blaze that were the stars—Earth had stood as a sign of haven. To Jorun, who came from Galactic center and its uncountable hosts of suns, heaven was bare, this was the outer fringe where the stars thinned away toward hideous immensity. He had shivered a little, drawn the envelope of air and warmth closer about him, with a convulsive movement. The silence drummed in his head. Then he streaked for the north-pole rendezvous of his group.

Well, he thought now, *we have a pretty routine job. The first expedition here, five years ago, prepared the natives for the fact they'd have*

to go. Our party simply has to organize these docile peasants in time for the ships. But it had meant a lot of hard work, and he was tired. It would be good to finish the job and get back home.

Or would it?

He thought of flying with Zarek, his team-mate, from the rendezvous to this area assigned as theirs. Plains like oceans of grass, wind-rippled, darkened with the herds of wild cattle whose hoofbeats were a thunder in the earth; forests, hundreds of kilometers of old and mighty trees, rivers piercing them in a long steel gleam; lakes where fish leaped; spilling sunshine like warm rain, radiance so bright it hurt his eyes, cloud-shadows swift across the land. It had all been empty of man, but still there was a vitality here which was almost frightening to Jorun. His own grim world of moors and crags and spin-drift seas was a niggard beside this: here life covered the earth, filled the oceans, and made the heavens clangerous around him. He wondered if the driving energy within man, the force which had raised him to the stars, made him half-god and half-demon, if that was a legacy of Terra.

Well—man had changed; over the thousands of years, natural and controlled adaptation had fitted him to the worlds he had colonized, and most of his many races could not now feel at home here. Jorun thought of his own party: round, amber-skinned Cyclo from a tropic world, complaining bitterly about the cold and Agyners, gay young Cluthe, gangling and bulge-chested; sophisticated Tarsians of the flowing dark hair and the lustrous eyes—no, to them Earth was only one more planet, out of thousands they had seen in their long lives.

And I'm a sentimental fool.

2



HE COULD have willed the vague regret out of his trained nervous system, but he didn't want to. This was the last time human eyes would ever look on Earth, and somehow Jorun felt that it should be more to

him than just another psychotechnic job.

"Hello, good sir."

He turned at the voice and forced his tired lips into a friendly smile. "Hello, Julith," he said. It was a wise policy to learn the names of the townspeople, at least, and she was a great-great-granddaughter of the Speaker.

She was some thirteen or fourteen years old, a freckle-faced child with a shy smile, and steady green eyes. There was a certain awkward grace about her, and she seemed more imaginative than most of her stolid race. She curtsied quaintly for him, her bare foot reaching out under the long smock which was daily female dress here.

"Are you busy, good sir?" she asked.

"Well, not too much," said Jorun. He was glad of a chance to talk; it silenced his thoughts. "What can I do for you?"

"I wondered—" She hesitated, then, breathlessly: "I wonder if you could give me a lift down to the beach? Only for an hour or two. It's too far to walk there before I have to be home, and I can't borrow a car, or even a horse. If it won't be any trouble, sir."

"Mmmm—shouldn't you be at home now? Isn't there milking and so on to do?"

"Oh, I don't live on a farm, good sir. My father is a baker."

"Yes, yes, so he is. I should have remembered." Jorun considered for an instant. There was enough to do in this, and it wasn't fair for him to play lonely while Zarek worked alone. "Why do you want to go to the beach, Julith?"

"We'll be busy packing up," she said. "Starting tomorrow, I guess. This is my last chance to see it."

Jorun's mouth twisted a little. "All right," he said; "I'll take you."

"You are very kind, good sir," she said gravely.

He didn't reply, but held out his arm, and she clasped it with one hand while her other arm gripped his waist. The generator inside his skull responded to his will, reaching out and clawing itself to the fabric of forces and energies which was physical space. They rose quietly, and went so slowly seaward that he didn't have to raise a wind-screen.

"Will we be able to fly like this when we get to the stars?" she asked.

"I'm afraid not, Julith," he said. "You see, the people of my civilization are born this way. Thousands of years ago, men learned how to control the great basic forces of the cosmos with only a small bit of energy. Finally they used artificial mutation—that is, they changed themselves, slowly, over many generations, until their brains grew a new part that could generate this controlling force. We can now even, fly between the stars, by this power. But your people don't have that brain, so we had to build spaceships to take you away."

"I see," she said.

"Your great-great-great-grandchildren can be like us, if your people want to be changed thus," he said.

"They didn't want to change before," she answered. "I don't think they'll do it now, even in their new home." Her voice held no bitterness; it was an acceptance.

Privately, Jorun doubted it. The psychic shock of this uprooting would be bound to destroy the old traditions of the Terrans; it would not take many centuries before they were culturally assimilated by Galactic civilization.

Assimilated—nice euphemism. Why not just say—eaten?

THEY LANDED on the beach. It was broad and white, running in dunes from the thin, harsh, salt-streaked grass to the roar and tumble of surf. The sun was low over the watery horizon, filling the damp, blowing air with gold. Jorun could almost look directly at its huge disc.

He sat down. The sand gritted tiniely under him, and the wind ruffled his hair and filled his nostrils with its sharp wet smell. He picked up a conch and turned it over in his fingers, wondering at the intricate architecture of it.

"If you hold it to your ear," said Julith, "you can hear the sea." Her childish voice was curiously tender around the rough syllables of Earth's language.

He nodded and obeyed her hint. It was only the small pulse of blood within him—you heard the same thing out in the great hollow silence of space—but it did sing of restless immensities, wind and foam, and the long waves marching under the moon.

"I have two of them myself," said Julith. "I want them so I can always remember this beach. And my children and their children will hold them, too, and hear our sea talking." She folded his fingers around the shell. "You keep this one for yourself."

"Thank you," he said. "I will."

The combers rolled in, booming and spouting against the land. The Terrans called them the horses of God. A thin cloud in the west was turning rose and gold.

"Are there oceans on our new planet?" asked Julith.

"Yes," he said. "It's the most Earth-like world we could find that wasn't already inhabited. You'll be happy there."

But the trees and grasses, the soil and the fruits thereof, the beasts of the field and the birds of the air and the fish of the waters beneath, form and color, smell and sound, taste and texture, everything is different. Is alien. The difference is small, subtle, but it is the abyss of two billion years of separate evolution, and no other world can ever quite be Earth.

Julith looked straight at him with solemn eyes. "Are you folk afraid of Hulduvians?" she asked.

"Why, no," he said. "Of course not."

"Then why are you giving Earth to them?" It was a soft question, but it trembled just a little.

"I thought all your people understood the reason by now," said Jorun. "Civilization—the civilization of man and his nonhuman allies—has moved inward, toward the great star-clusters of Galactic center. This part of space means nothing to us any more; it's almost a desert. You haven't seen starlight till you've been by Sagittarius. Now the Hulduvians are another civilization. They are not the least bit like us; they live on big, poisonous worlds like Jupiter and Saturn. I think they would seem like pretty nice monsters if they weren't so alien to us that neither side can really understand the other. They use the cosmic energies too, but in a different way—and their way interferes with ours just as ours interferes with theirs. Different brains, you see.

"Anyway, it was decided that the two civilizations would get along best by just staying away from each other. If they divided up the Galaxy between them, there would be no interference; it would be too far from one civiliza-

tion to the other. The Hulduvians were, really, very nice about it. They're willing to take the outer rim, even if there are fewer stars, and let us have the center.

"So by the agreement, we've got to have all men and manlike beings out of their territory before they come to settle it, just as they'll move out of ours. Their colonists won't be coming to Jupiter and Saturn for centuries yet; but even so, we have to clear the Sirius Sector now, because there'll be a lot of work to do elsewhere. Fortunately, there are only a few people living in this whole part of space. The Sirius Sector has been an isolated, primi—ah—quiet region since the First Empire fell, fifty thousand years ago."

Julith's voice rose a little. "But those people are *us*!"

"And the folk of Alpha Centauri and Procyon and Sirius and—oh, hundreds of other stars. Yet all of you together are only one tiny drop in the quadrillions of the Galaxy. Don't you see, Julith, you have to move for the good of all of us?"

"Yes," she said. "Yes, I know all that."

She got up, shaking herself. "Let's go swimming."

Jorun smiled and shook his head. "No, I'll wait for you if you want to go."

SHE NODDED and ran off down the beach, sheltering behind a dune to put on a bathing-suit. The Terrans had a nudity taboo, in spite of the mild interglacial climate; typical primitive irrationality. Jorun lay back, folding his arms behind his head, and looked up at the darkening sky. The evening star twinkled forth, low and white on the dusk-blue horizon. Venus—or was it Mercury? He wasn't sure. He wished he knew more about the early history of the Solar System, the first men to

ride their thunderous rockets out to die on unknown hell-worlds—the first clumsy steps toward the stars. He could look it up in the archives of Corazuno, but he knew he never would. Too much else to do, too much to remember. Probably less than one percent of mankind's throngs even knew where Earth was, today—though, for a while, it had been quite a tourist-center. But that was perhaps thirty thousand years ago.

Because this world, out of all the billions, has certain physical characteristics, he thought, my race has made them into standards. Our basic units of length and time and acceleration, our comparisons by which we classify the swarming planets of the Galaxy, they all go back ultimately to Earth. We bear that unspoken memorial to our birthplace within our whole civilization, and will bear it forever. But has she given us more than that? Are our own selves, bodies and minds and dreams, are they also the children of Earth?

Now he was thinking like Kormt, stubborn old Kormt who clung with such a blind strength to this land simply because it was his. When you considered all the races of this wander-footed species—how many of them there were, how many kinds of man between the stars! And yet they all walked upright: they all had two eyes and a nose between and a mouth below; they were all cells of that great and ancient culture which had begun here, eons past, with the first hairy half-man who kindled a fire against night. If Earth had not had darkness and cold and prowling beasts, oxygen and cellulose and flint, that culture might never have gestated.

I'm getting unlogical. Too tired, nerves worn too thin, psychosomatic control slipping. Now Earth is becoming some obscure mother-symbol for me.

Or has she always been one, for the whole race of us?

A seagull cried harshly overhead and soared from view.

The sunset was smoldering away and dusk rose like fog out of the ground. Julith came running back to him, her face indistinct in the gloom. She was breathing hard, and he couldn't tell if the catch in her voice was laughter or weeping.

"I'd better be getting home," she said.

3



HEY FLEW slowly back. The town was a yellow twinkle of lights, warmth gleaming from windows across many empty kilometers. Jorun set the girl down outside her home.

"Thank you, good sir," she said, curtseying. "Won't you come in to dinner?"

"Well—"

The door opened, etching the girl black against the rudiness inside. Jorun's luminous tunic made him like a torch in the dark. "Why, it's the starman," said a woman's voice.

"I took your daughter for a swim," he explained. "I hope you don't mind."

"And if we did, what would it matter?" grumbled a bass tone. Jorun recognized Kormt; the old man must have come as a guest from his farm on the outskirts. "What could we do about it?"

"Now, Granther, that's no way to talk to the gentleman," said the woman. "He's been very kind. Won't you come eat with us, good sir?"

Jorun refused twice, in case they were only being polite, then accepted gladly enough. He was tired of cook-

my at the inn where he and Zarek
bowed. "Thank you."

He entered, ducking under the low door. A single long, smoky-raftered room was kitchen, diningroom, and parlor; doors led off to the sleeping quarters. It was furnished with a clumsy elegance, skin rugs, oak wainscoting, carved pillars, glowing ornaments of hammered copper. A radium clock, which must be incredibly old, stood on the stone mantel, above a snapping fire; a chemical-powered gun, obviously of local manufacture, hung over it. Julith's parents, a plain, quiet peasant couple, conducted him to the end of the wooden table, while half a dozen children watched him with large eyes. The younger children were the only Terrans who seemed to find this removal an adventure.

The meal was good and plentiful: meat, vegetables, bread, beer, milk, ice cream, coffee, all of it from the farms hereabouts. There wasn't much trade between the few thousand communities of Earth; they were practically self-sufficient. The company ate in silence, as was the custom here. When they were finished, Jorun wanted to go, but it would have been rude to leave immediately. He went over to a chair by the fireplace, across from the one in which Kormt sprawled.

The old man took out a big-bowled pipe and began stuffing it. Shadows wave across his seamed brown face, his eyes were a gleam out of darkness. "I'll go down to City Hall with you soon," he said; "I imagine that's where the work is going on."

"Yes," said Jorun. "I can relieve Zarek at it. I'd appreciate it if you did come, good sir. Your influence is very steadying on these people."

"It should be," said Kormt. "I've been their Speaker for almost a hundred years. And my father Gerlaug was before me, and his father Korint was before him." He took a brand

from the fire and held it over his pipe, puffing hard, looking up at Jorun through tangled brows. "Who was your great-grandfather?"

"Why—I don't know. I imagine he's still alive somewhere, but—"

"I thought so. No marriage. No family. No home. No tradition." Kormt shook his massive head, slowly. "I pity you Galactics!"

"Now please, good sir—" Damn it all, the old clodhopper could get as irritating as a faulty computer. "We have records that go back to before man left this planet. Records of everything. It is you who have forgotten."

Kormt smiled and puffed blue clouds at him. "That's not what I meant."

"Do you mean you think it is good for men to live a life that is unchanging, that is just the same from century to century—no new dreams, no new triumphs, always the same grubbing rounds of days? I cannot agree."

JORUN'S mind flickered over history, trying to evaluate the basic motivations of his opponent. Partly cultural, partly biological, that must be it. Once Terra had been the center of the civilized universe. But the long migration starward, especially after the fall of the First Empire, drained off the most venturesome elements of the population. That drain went on for thousands of years. Sol was backward, ruined and impoverished by the remorseless price of empire, helpless before the storms of barbarian conquest that swept back and forth between the stars. Even after peace was restored, there was nothing to hold a young man or woman of vitality and imagination here—not when you could go toward Galactic center and join the new civilization building out there. Space-traffic came ever less frequently to Sol; old machines rusted away and were not replaced; best to get out while there was still time.

Eventually there was a fixed psychosomatic type, one which lived close to the land, in primitive changeless communities and isolated farmsteads—a type content to gain its simple needs by the labor of hand, horse, or an occasional battered engine. A culture grew up which increased that rigidity. So few had visited Earth in the last several thousand years—perhaps one outsider a century, stopping briefly off on his way to somewhere else—that there was no challenge or encouragement to alter. The Terrans didn't want more people, more machines, more anything; they wished only to remain as they were.

You couldn't call them stagnant. Their life was too healthy, their civilization too rich in its own way—folk art, folk music, ceremony, religion, the intimacy of family life which the Galactics had lost—for that term. But to one who flew between the streaming suns, it was a small existence.

Kormt's voice broke in on his reverie. "Dreams, triumphs, work, deeds, love and life and finally death and the long sleep in the earth," he said. "Why should we want to change them? They never grow old; they are new for each child that is born."

"Well," said Jorun, and stopped. You couldn't really answer that kind of logic. It wasn't logic at all, but something deeper.

"Well," he started over, after a while, "as you know, this evacuation was forced on us, too. We don't want to move you, but we must."

"Oh, yes," said Kormt. "You have been very nice about it. It would have been easier, in a way, if you'd come with fire and gun and chains for us, like the barbarians did long ago. We could have understood you better then."

"At best, it will be hard for your people," said Jorun. "It will be a shock, and they'll need leaders to

guide them through it. You have a duty to help them out there, good sir."

"Maybe." Kormt blew a series of smoke rings at his youngest descendant, three years old, who crowed with laughter and climbed up on his knee. "But they'll manage."

"You can't seem to realize," said Jorun, "that you are the *last man on Earth* who refuses to go. You will be *alone*. For the rest of your life! We couldn't come back for you later under any circumstances, because there'll be Hulduvian colonies between Sol and Sagittarius which we would disturb in passage. You'll be alone, I say!"

Kormt shrugged. "I'm too old to change my ways; there can't be many years left me, anyway. I can live well, just off the food-stores that'll be left here." He ruffled the child's hair, but his face drew into a scowl. "Now, no more of that, good sir, if you please; I'm tired of this argument."

JORUN nodded and fell into the silence that held the rest. Terrans would sometimes sit for hours without talking, content to be in each other's nearness. He thought of Kormt, Gerlaug's son, last man on Earth, altogether alone, living alone and dying alone; and yet, he reflected, was that solitude any greater than the one in which all men dwelt all their days?

Presently the Speaker set the child down, knocked out his pipe, and rose. "Come, good sir," he said, reaching for his staff. "Let us go."

They walked side by side down the street, under the dim lamps and past the yellow windows. The cobbles gave back their footfalls in a dull clatter. Once in a while they passed someone else, a vague figure which bowed to Kormt. Only one did not notice them,

an old woman who walked crying between the high walls.

"They say it is never night on your worlds," said Kormt.

Jorun threw him a sidelong glance. His face was a strong jutting of highlights from sliding shadow. "Some planets have been given luminous skies," said the technician, "and a few still have cities, too, where it is always light. But when every man can control the cosmic energies, there is no real reason for us to live together; most of us dwell far apart. There are very dark nights on my own world, and I cannot see any other home from my own—just the moors."

"It must be a strange life," said Kormt. "Belonging to no one."

They came out on the market-square, a broad paved space walled in by houses. There was a fountain in its middle, and a statue dug out of the ruins had been placed there. It was broken, one arm gone—but still the white slim figure of the dancing girl stood with youth and laughter, forever under the sky of Earth. Jorun knew that lovers were wont to meet here, and briefly, irrationally, he wondered how lonely the girl would be in all the millions of years to come.

The City Hall lay at the farther end of the square, big and dark, its eaves carved with dragons, and the gables topped with wing-spreading birds. It was an old building; nobody knew how many generations of men had gathered here. A long, patient line of folk stood outside it, shuffling in one by one to the registry desk; emerging, they went off quietly into the darkness, toward the temporary shelters erected for them.

Walking by the line, Jorun picked faces out of the shadows. There was a young mother holding a crying child, her head bent over it in a timeless pose, murmuring to soothe it. There was a mechanic, still sooty from his work, smiling wearily at some tired face of the man behind him. There

was a scowling, black-browed peasant who muttered a curse as Jorun went by; the rest seemed to accept their fate meekly enough. There was a priest, his head bowed, alone with his God. There was a younger man, his hands clenching and unclenching, big helpless hands, and Jorun heard him saying to someone else: "—if they could have waited till after harvest. I hate to let good grain stand in the field."

JORUN WENT into the main room, toward the desk at the head of the line. Hulking hairless Zarek was patiently questioning each of the hundreds who came hat in hand before him: name, age, sex, occupation, dependents, special needs or desires. He punches the answers out on the recorder machine, half a million lives were held in its electronic memory.

"Oh, there you are," his bass rumbled. "Where've you been?"

"I had to do some concy work," said Jorun. That was a private code term, among others: concy, conciliation, anything to make the evacuation go smoothly. "Sorry to be so late. I'll take over now."

"All right. I think we can wind the whole thing up by midnight." Zarek smiled at Kormt. "Glad you came, good sir. There are a few people I'd like you to talk to." He gestured at half a dozen seated in the rear of the room. Certain complaints were best handled by native leaders.

Kormt nodded and strode over to the folk. Jorun heard a man begin some long-winded explanation: he wanted to take his own plow along, he'd made it himself and there was no better plow in the universe, but the star-man said there wouldn't be room.

"They'll furnish us with all the stuff we need, son," said Kormt.

"But it's my plow!" said the man. His fingers twisted his cap.

Kormt sat down and began soothing him.

The head of the line waited a few

meters off while Jorun took Zarek's place. "Been a long grind," said the latter. "About done now, though. And will I be glad to see the last of this planet!"

"I don't know," said Jorun. "It's a lovely world. I don't think I've ever seen a more beautiful one."

Zarek snorted. "Me for Thonnvar! I can't wait to sit on the terrace by the Scarlet Sea, fern-trees and red grass all around, a glass of oehl in my hand and the crystal geysers in front of me. You're a funny one, Jorun."

The Fulkhisian shrugged slender shoulders. Zarek clapped him on the back and went out for supper and sleep. Jorun beckoned to the next Terran and settled down to the long, almost mindless routine of registration. He was interrupted once by Kormt, who yawned mightily and bade him good-night; otherwise it was a steady, half-conscious interval in which one anonymous face after another passed by. He was dimly surprised when the last one came up. This was a plump, cheerful, middle-aged fellow with small shrewd eyes, a little more colorfully dressed than the others. He gave his occupation as merchant—a minor tradesman, he explained, dealing in the little things it was more convenient for the peasants to buy than to manufacture themselves.

"I hope you haven't been waiting too long," said Jorun. Concy statement.

"Oh, no." The merchant grinned. "I knew those dumb farmers would be here for hours, so I just went to bed and got up half an hour ago, when it was about over."

"Clever." Jorun rose, sighed, and stretched. The big room was cavernously empty, its lights a harsh glare. It was very quiet here.

"Well, sir, I'm a middling smart chap, if I say it as shouldn't. And you know, I'd like to express my appreciation of all you're doing for us."

"Can't say we're doing much." Jorun locked the machine.

"Oh, the apple-knockers may not like it, but really, good sir, this hasn't been any place for a man of enterprise. It's dead. I'd have got out long ago if there'd been any transportation. Now, when we're getting back into civilization, there'll be some real opportunities. I'll make my pile inside of five years, you bet."

Jorun smiled, but there was a bleakness in him. What chance would this barbarian have even to get near the gigantic work of civilization—let alone comprehend it or take part in it. He hoped the little fellow wouldn't break his heart trying.

"Well," he said, "goodnight, and good luck to you."

"Goodnight, sir. We'll meet again, I trust."

Jorun switched off the lights and went out into the square. It was completely deserted. The moon was up now, almost full, and its cold radiance dimmed the lamps. He heard a dog howling far off. The dogs of Earth—such as weren't taken along—would be lonely, too.

Well, he thought, the job's over. Tomorrow, or the next day, the ships come.

4



HE FELT VERY tired, but didn't want to sleep, and willed himself back to alertness. There hadn't been much chance to inspect the ruins, and he felt it would be appropriate to see them by moonlight.

Rising into the air, he ghosted above roofs and trees until he came to the dead city. For a while he hovered in a sky like dark velvet,

a faint breeze murmured around him, and he heard the remote noise of crickets and the sea. But stillness enveloped it all, there was no real sound.

Sol City, capital of the legendary First Empire, had been enormous. It must have sprawled over forty or fifty thousand square kilometers when it was in its prime, when it was the gay and wicked heart of human civilization and swollen with the lifeblood of the stars. And yet those who built it had been men of taste, they had sought out genius to create for them. The city was not a collection of buildings; it was a balanced whole, radiating from the mighty peaks of the central palace, through colonnades and parks and leaping skyways, out to the temple-like villas of the rulers. For all its monstrous size, it had been a fairy sight, a woven lace of polished metal and white, black, red stone, colored plastic, music and light—everywhere light.

Bombarded from space; sacked again and again by the barbarian hordes who swarmed maggot-like through the bones of the slain Empire; weathered, shaken by the slow sliding of Earth's crust; pried apart by patient, delicate roots; dug over by hundreds of generations of archeologists, treasure-seekers, the idly curious; made a quarry of metal and stone for the ignorant peasants who finally huddled about it—still its empty walls and blind windows, crumbling arches and toppled pillars held a ghost of beauty and magnificence which was like a half-remembered dream. A dream the whole race had once had.

And now we're waking up.

Jorun moved silently over the ruins. Trees growing between tumbled blocks dappled them with moonlight and shadow; the marble was very white and fair against darkness. He

hovered by a broken caryatid, marveling at its exquisite leaping liteness; that girl had borne tons of stone like a flower in her hair. Further on, across a street that was a lane of woods, beyond a park that was thick with forest, lay the nearly complete outline of a house. Only its rain-blurred walls stood, but he could trace the separate rooms: here a noble had entertained his friends, robes that were fluid rainbows, jewels dripping fire, swift cynical interplay of wits like sharpened swords rising above music and the clear sweet laughter of dancing-girls; here people whose flesh was now dust had slept and made love and lain side-by-side in darkness to watch the moving pageant of the city; here the slaves had lived and worked and sometimes wept; here the children had played their ageless games under willows, between banks of roses. Oh, it had been a hard and cruel time; it was well gone but it had lived. It had embodied man, all that was noble and splendid and evil and merely wistful in the race, and now its late children had forgotten.

A cat sprang up on one of the walls and flowed noiselessly along it, hunting. Jorun shook himself and flew toward the center of the city, the imperial palace. An owl hooted somewhere, and a bat fluttered out of his way like a small damned soul blackened by hellfire. He didn't raise a wind-screen, but let the air blow around him, the air of Earth.

THE PALACE was almost completely wrecked, a mountain of heaped rocks, bare bones of "eternal" metal gnawed thin by steady ages of wind and rain and frost, but once it must have been gigantic. Men rarely built that big nowadays, they didn't need to; and the whole human spirit had changed, become ever more abstract, finding its treasures within itself. But there had been an elemental

magnificence about early man and the works he raised to challenge the sky.

One tower still stood—a gutted shell, white under the stars, rising in a filigree of columns and arches which seemed impossibly airy, as if it were built of moonlight. Jorun settled on its broken upper balcony, dizzily high above the black-and-white fantasy of the ruins. A hawk flew shrieking from its nest, then there was silence.

No—wait—another yell, ringing down the star ways, a dark streak across the moon's face. "Hai-ah!" Jorun recognized the joyful shout of young Cluthe, rushing through heaven like a demon on a broomstick, and scowled in annoyance. He didn't want to be bothered now.

Well, they had as much right here as he. He repressed the emotion, and even managed a smile. After all, he would have liked to feel gay and reckless at times, but he had never been able to. Jorun was little older than Cluthe—a few centuries at most—but he came of a melancholy folk; he had been born old.

Another form pursued the first. As they neared, Jorun recognized Taliuvenna's supple outline. Those two had been teamed up for one of the African districts, but—

They sensed him and came wildly out of the sky to perch on the balcony railing and swing their legs above the heights. "How're you?" asked Cluthe. His lean face laughed in the moonlight. "Whoo-oo, what a flight!"

"I'm all right," said Jorun. "You through in your sector?"

"Uh-huh. So we thought we'd just duck over and look in here. Last chance anyone'll ever have to do some sight-seeing on Earth."

Taliuvenna's full lips drooped a bit as she looked over the ruins. She came from Yunith, one of the few planets where they still kept cities, and was as much a child of their soaring arrogance as Jorun of his hills and tundras and

great empty seas. "I thought it would be bigger," she said.

"Well, they were building this fifty or sixty thousand years ago," said Cluthe. "Can't expect too much."

"There is good art left here," said Jorun. "Pieces which for one reason or another weren't carried off. But you have to look around for it."

"I've seen a lot of it already, in museums," said Taliuvenna. "Not bad."

"C'mon, Tally," cried Cluthe. He touched her shoulder and sprang into the air. "Tag! You're it!"

She screamed with laughter and shot off after him. They rushed across the wilderness, weaving in and out of empty windows and broken colonnades, and their shouts woke a clamor of echoes.

Jorun sighed. *I'd better go to bed,* he thought. *It's late.*

THE SPACESHIP was a steely pillar against a low gray sky. Now and then a fine rain would drizzle down, blurring it from sight; then that would end, and the ship's flanks would glisten as if they were polished. Clouds scudded overhead like flying smoke, and the wind was loud in the trees.

The line of Terrans moving slowly into the vessel seemed to go on forever. A couple of the ship's crew flew above them, throwing out a shield against the rain. They shuffled without much talk or expression, pushing carts filled with their little possessions. Jorun stood to one side, watching them go by, one face after another—scored and darkened by the sun of Earth, the winds of Earth, hands still grimy with the soil of Earth.

Well, he thought, there they go. They aren't being as emotional about it as I thought they would. I wonder if they really do care.

Julith went past with her parents. She saw him and darted from the line and curtsied before him.

"Goodbye, good sir," she said. Looking up, she showed him a small and serious face. "Will I ever see you again?"

"Well," he lied, "I might look in on you sometime."

"Please do! In a few years, maybe, when you can."

It takes many generations to raise a people like this to our standard. In a few years—to me—she'll be in her grave.

"I'm sure you'll be very happy," he said.

She gulped. "Yes," she said, so low he could barely hear her. "Yes, I know I will." She turned and ran back to her mother. The raindrops glistened in her hair.

Zarek came up behind Jorun. "I made a last-minute sweep of the whole area," he said. "Detected no sign of human life. So it's all taken care of, except your old man."

"Good," said Jorun tonelessly.

"I wish you could do something about him."

"So do I."

Zarek strolled off again.

A young man and woman, walking hand in hand, turned out of the line not far away and stood for a little while. A spaceman zoomed over to them. "Better get back," he warned. "You'll get rained on."

"That's what we wanted," said the young man.

The spaceman shrugged and resumed his hovering. Presently the couple re-entered the line.

The tail of the procession went by Jorun and the ship swallowed it fast. The rain fell harder, bouncing off his force-shield like silver spears. Lightning winked in the west, and he heard the distant exuberance of thunder.

Kormt came walking slowly toward him. Rain streamed off his clothes and matted his long gray hair and beard. His wooden shoes made a wet sound in the mud. Jorun extended the force-shield to cover him. "I hope

you've changed your mind," said the Fulkhisian.

"No, I haven't," said Kormt. "I just stayed away till everybody was aboard. Don't like goodbyes."

"You don't know what you're doing," said Jorun for the—thousandth?—time. "It's plain madness to stay here alone."

"I told you I don't like goodbyes," said Kormt harshly.

"I have to go advise the captain of the ship," said Jorun. "You have maybe half an hour before she lifts. Nobody will laugh at you for changing your mind."

"I won't." Kormt smiled without warmth. "You people are the future, I guess. Why can't you leave the past alone? I'm the past." He looked toward the far hills, hidden by the noisy rain. "I like it here, Galactic. That should be enough for you."

"Well, then—" Jorun held out his hand in the archaic gesture of Earth. "Goodbye."

"Goodbye." Kormt took the hand with a brief, indifferent clasp. Then he turned and walked off toward the village. Jorun watched him till he was out of sight.

The technician paused in the air-lock door, looking over the gray landscape and the village from whose chimneys no smoke rose. *Farewell, my mother*, he thought. And then, surprising himself: *Maybe Kormt is doing the right thing after all.*

He entered the ship and the door closed behind him.

TOWARD evening, the clouds lifted and the sky showed a clear pale blue—as if it had been washed clean—and the grass and leaves glistened. Kormt came out of the house to watch the sunset. It was a good one, all flame and gold. A pity little Julith wasn't here to see it; she'd always liked sunsets. But Julith was so far away now that if she sent a call to him,

calling with the speed of light, it would not come before he was dead.

Nothing would come to him. Not ever again.

He tamped his pipe with a horny thumb and lit it and drew a deep cloud into his lungs. Hands in pockets, he strolled down the wet streets. The sound of his clogs was unexpectedly loud.

Well, son, he thought, now you've got a whole world all to yourself, to do with just as you like. You're the richest man who ever lived.

There was no problem in keeping alive. Enough food of all kinds was stored in the town's freeze-vault to support a hundred men for the ten or twenty years remaining to him. But he'd want to stay busy. He could maybe keep three farms from going to seed—watch over fields and orchards and livestock, repair the buildings, dust and wash and light up in the evening. A man ought to keep busy.

He came to the end of the street, where it turned into a graveled road winding up toward a high hill, and followed that. Dusk was creeping over the fields, the sea was a metal streak very far away and a few early stars blinked forth. A wind was springing up, a soft murmurous wind that talked in the trees. But how quiet things were!

On top of the hill stood the chapel, a small steepled building of ancient stone. He let himself in the gate and walked around to the graveyard behind. There were many of the demure white tombstones—thousands of years of Solis Township men and women who had lived and worked and begotten, laughed and wept and died. Someone had put a wreath on one grave only this morning; it brushed against his leg as he went by. Tomorrow it would be withered, and weeds would start to grow. He'd have to tend the chapel yard, too. Only fitting.

He found his family plot and stood with feet spread apart, fists on hips, smoking and looking down at the markers Gerlaug Kormt's son, Taraa Huwan's daughter, these hundred years had they lain in the earth. Hello, Dad, hello, Mother. His fingers reached out and stroked the headstone of his wife. And so many of his children were here, too; sometimes he found it hard to believe that tall Gerlaug and laughing Stamm and shy, gentle Huwan were gone. He'd outlived too many people.

I had to stay, he thought. This is my land, I am of it and I couldn't go. Someone had to stay and keep the land, if only for a little while. I can give it ten more years before the forest comes and takes it.

Darkness grew around him. The woods beyond the hill loomed like a wall. Once he started violently, he thought he heard a child crying. No, only a bird. He cursed himself for the senseless pounding of his heart.

Gloomy place here, he thought. Better get back to the house.

He groped slowly out of the yard, toward the road. The stars were out now. Kormt looked up and thought he had never seen them so bright. Too bright; he didn't like it.

Go away, stars, he thought. You took my people, but I'm staying here. This is my land. He reached down to touch it, but the grass was cold and wet under his palm.

The gravel scrunched loudly as he walked, and the wind mumbled in the hedges, but there was no other sound. Not a voice called; not an engine turned; not a dog barked. No, he hadn't thought it would be so quiet.

And dark. No lights. Have to tend the street lamps himself—it was no fun, not being able to see the town from here, not being able to see anything except the stars. Should have remembered to bring a flashlight, but he was old and absentminded, and

there was no one to remind him. When he died, there would be no one to hold his hands; no one to close his eyes and lay him in the earth—and the forests would grow in over the land and wild beasts would nuzzle his bones.

But I knew that. What of it? I'm tough enough to take it.

The stars flashed and flashed above him. Looking up, against his own will, Kornt saw how bright they were, how bright and quiet. And how very far away! He was seeing light that had left its home before he was born.

He stopped, sucking in his breath between his teeth. "No," he whispered.

This was his land. This was Earth, the home of man; it was his and he was its. This was the *land*, and not a single dust-mote, crazily reeling and spinning through an endlessness of dark and silence, cold and immensity. Earth could not be so alone!

The last man alive. The last man in all the world!

He screamed, then, and began to run. His feet clattered loud on the road; the small sound was quickly swallowed by silence, and he covered his face against the relentless blaze of the stars. But there was no place to run to, no place at all.

Readin' and Writhin'

THE SPACE MERCHANTS by Frederick Pohl and C. M. Kornbluth Ballantine, 175 pp paperbound 35¢ 192 pp hardbound \$1.50

When this came out in *Galaxy* as "Gravy Planet", it seemed to be merely an entertaining hunt-and-chase thriller, with the background of advertising horrors for laughs, a satire on the way things are now. Since then I've taken a closer look at the gruesomeness of the advertising we have grown numb to and it begins to look more like a trend than a joke.

If advertising is used to sell cigarettes, chewing gum, labor unions, opinions of the NAM, candidates for election, and movies, why shouldn't it make the smart deadly move of selling itself? Self-preservation is the business law that works every time.

Could the American public be sold on the idea that advertising men are the aristocracy of the Earth? Could they believe that advertising is the foundation of American business? Could they be convinced that the first duty of a patriot and a man of principle is to buy things the advertisements tell him to buy, whether he wants them or not?

If people can be muddled by pictures of girls in bathing suits into buying something that they would not want if they were left alone—(And they *can* be) why shouldn't they be muddled into buying anything.

"GLORIA GLAMORPUSS SMOKES BLANKS. *'They're milder!'*" GLORIA GLAMORPUSS DRINKS PINK. *'It's stronger!'*" GLORIA GLAMORPUSS

READS NOTHING BUT ADVERTISEMENTS. *"They're exciting!"*

Or the sententious voice announcing. "Doctors Say—Drink nutracola!" "Economists say—Don't save money, Buy things!" "Investigating Senator Blank says—Read Advertisements. They're American!"

Is there a dividing-line beyond which people will stop believing anything presented by advertising methods, or isn't there? And, if so, where is it?

Two businessmen I have spoken with since I read "Gravy Planet", in *Galaxy* have told me solemnly. "American Business Is Founded On Advertising." Strange ideas like that don't come by spontaneous generation—at least, I don't think they do.

The nuisance-value ad is a recognized device on the radio. Ad agencies don't seem to care what they do to you if they can only get you to buy something thereby. From ads which irritate by loud squawking voices, which rely on you not to be quick enough to turn off the radio before you hear the pitch, to 3D ads which squirt a foul stench at you and bellow "Do You Smell Like This?" is a short step. And from a here-and-now captive audience on a bus, unable to turn off the bus radio which pumps advertisements at them, to a law that it is a seditious unAmerican Restraining of Advertising to hold your nose when the deodorant ads squirt the sweat-smell at you, or to turn off your radio at all, might not be such a funny exaggeration as it seems at first glance.

[Turn To Page 36]

He had but one ambition, one desire: to pilot the first manned rocket to the moon. And he was prepared as no man had ever prepared himself before . . .



DESIRE NO MORE

by Algis Budrys

(illustrated by Milton Luros)

"Desire no more than to thy lot may fall..."

—Chaucer

THE SMALL young man looked at his father, and shook his head.

"But you've got to learn a trade," his father said, exasperated. "I can't

afford to send you to college; you know that."

"I've got a trade," he answered.

His father smiled thinly. "What?" he asked patronizingly.

"I'm a rocket pilot," the boy said, his thin jaw stretching the skin of his cheeks.

His father laughed in the way the

boy had learned to anticipate and hate. "Yeah," he said. He leaned back in his chair and laughed so hard that the Sunday paper slipped off his wide lap and fell to the floor with an unnoticed stiff rustle.

"A *rocket* pilot!" His father's derision hooted through the quiet parlor. "A ro—*oh, no!*—a *rocket pilot!*"

The boy stared silently at the convulsed figure in the chair. His lips fell into a set white bar, and the corners of his jaws bulged with the tension in their muscles. Suddenly, he turned on his heel and stalked out of the parlor, through the hall, out the front door, to the porch. He stopped there, hesitating a little.

"*Marty!*" His father's shout followed him out of the parlor. It seemed to act like a hand between the shoulder-blades, because the boy almost ran as he got down the porch stairs.

"What is it, Howard?" Marty's mother asked in a worried voice as she came in from the kitchen, her damp hands rubbing themselves dry against the sides of her housedress.

"*Crazy kid,*" Howard Isherwood muttered. He stared at the figure of his son as the boy reached the end of the walk and turned off into the street. "*Come back here!*" he shouted. "A *rocket* pilot," he cursed under his breath. "What's the kid been reading? Claiming he's a *rocket* pilot!"

Margaret Isherwood's brow furrowed into a faint, bewildered frown. "But—*isn't* he a little young? I know they're teaching some very odd things in high schools these days, but it seems to me. . ."

"Oh, for Pete's sake, Marge, there aren't even any *rockets* yet! *Come back here, you idiot!*" Howard Isherwood was standing on his porch, his clenched fists trembling at the ends of his stiffly-held arms.

"Are you sure, Howard?" his wife asked faintly.

"Yes, I'm *sure!*"

"But, where's he going?"

"*Stop that! Get off that bus! YOU hear me? Marty?*"

"*Howard! Stop acting like a child and talk to me! Where is that boy going?*"

Howard Isherwood, stocky, red-faced, forty-seven, and defeated, turned away from the retreating bus and looked at his wife. "I don't know," he told her bitterly, between rushes of air into his jerkily heaving lungs. "Maybe, the moon," he told her sarcastically.

Martin Isherwood, rocket pilot, weight 102, height 4', 11", had come of age at seventeen.

THE SMALL man looked at his faculty advisor. "No," he said. "I am not interested in working for a degree."

"But—" The faculty advisor unconsciously tapped the point of a yellow pencil against the fresh green of his desk blotter, leaving a rough arc of black flecks. "Look, Ish, you've got to either deliver or get off the basket. This program is just like the others you've followed for nine semesters; nothing but math and engineering. You've taken just about every undergraduate course there is in those fields. How long are you going to keep this up?"

"I'm signed up for Astronomy 101," Isherwood pointed out.

The faculty advisor snorted. "A snap course. A breather, after you've studied the same stuff in Celestial Navigation. What's the matter, Ish? Scared of liberal arts?"

Isherwood shook his head. "Uh-unh. Not interested. No time. And that Astronomy course isn't a breather. Different slant from Cee Nav—they won't be talking about stars as check points, but as things in themselves." Something seemed to flicker across his face as he said it.

The advisor missed it; he was too engrossed in his argument. "Still a

snap. What's the difference, how you look at a star?"

Isherwood almost winced. "Call it a hobby," he said. He looked down at his watch. "Come on, Dave. You're not going to convince me. You haven't convinced me any of the other times, either, so you might as well give up, don't you think? I've got a half hour before I go on the job. Let's go get some beer."

The advisor, not much older than Isherwood, shrugged, defeated. "Crazy," he muttered. But it was a hot day, and he was as thirsty as the next man.

The bar was air conditioned. The advisor shivered, half grinned, and softly quoted:

"Though I go bare, take ye no care,
I am nothing a-cold;
I stuff my skin so full within
Of jolly good ale and old."

"Huh?" Ish was wearing the look with which he always reacted to the unfamiliar.

The advisor lifted two fingers to the bartender and shrugged. "It's a poem; about four hundred years old, as a matter of fact."

"Oh."

"Don't you give a damn?" the advisor asked, with some peevishness.

Ish laughed shortly, without embarrassment. "Sorry, Dave, but no. It's not my racket."

The advisor cramped his hand a little too tightly around his glass. "Strictly a specialist, huh?"

Ish nodded. "Call it that."

"But *what*, for Pete's sake? What is this crazy specialty that blinds you to all the fine things that man has done?"

Ish took a swallow of his beer. "Well, now, if I was a poet, I'd say it was the finest thing that man has ever done."

The advisor's lips twisted in deri-

sion. "That's pretty fanatical, isn't it?"

"Uh-huh." Ish waved to the bartender for refills.

THE NAVION took a boiling thermal under its right wing and bucked upward suddenly, tilting at the same time, so that the pretty brunette girl in the other half of the side-by-side was thrown against him. Ish laughed, a sound that came out of his throat as turbulently as that sudden gust of heated air had shot up out of the Everglades, and corrected with a tilt of the wheel.

"Relax, Nan," he said, his words colored by the lingering laughter. "It's only air; nasty old air."

The girl patted her short hair back into place. "I wish you wouldn't fly this low," she said, half-frightened.

"Low? Call this low?" Ish teased. "Here. Let's drop it a little, and you'll *really* get an idea of how fast we're going." He nudged the wheel forward, and the Navion dipped its nose in a shallow dive, flattening out thirty feet above the mangrove. The swamp howled with the chug of the dancing pistons and the claw of the propeller at the protesting air, and, from the cockpit, the Everglades resolved into a dirty-green blur that rocketed backward into the slipstream.

"Marty!"

Ish chuckled again. He couldn't have held the ship down much longer, anyway. He tugged back on the wheel suddenly, targeting a cumulous bank with his spinner. His lips peeled back from his teeth, and his jaw set. The Navion went up at the clouds, her engine turning over as fast as it could, her wings cushioned on the rising thrust of another thermal.

And, suddenly, it was as if there were no girl beside him, to be teased, and no air to rock the wings—there were no wings. His face lost all expression. Faint beads of sweat broke out above his eyes and under his nose.

"Up," he grunted through his clenched teeth. His fists locked on the wheel. "Up!"

The *Navion* broke through the cloud, kept going. "Up." If he listened closely, in just the right way, he could almost hear. . .

"Marty!"

. . . the rumble of a louder, prouder engine than the Earth had ever known. He sighed, the breath whispering through his parting teeth, and the aircraft leveled off as he pushed at the wheel with suddenly lax hands. Still half-lost, he turned and looked at the white-faced girl. "Scare you?" he asked gently.

She nodded. Her fingertips were trembling on his forearm.

"Me too," he said. "Lost my head. Sorry."

"**L**OOK," HE told the girl, "You got any idea of what it costs to maintain a racing-plane? Everything I own is tied up in the Foo, my ground crew, my trailer, and that scrummy old Ryan that should have been salvaged ten years ago. I *can't* get married. Suppose I crack the Foo next week? You're dead broke, a widow, and with a funeral to pay for. The only smart thing to do is wait a while."

Nan's eyes clouded, and her lips trembled. "That's what I've been trying to say. *Why* do you have to win the Vandenberg Cup next week? Why can't you sell the Foo and go into some kind of business? You're a trained pilot."

He had been standing in front of her with his body unconsciously tense from the strain of trying to make her understand. Now he relaxed—more—he slumped—and something began to die in his face, and the first faint lines crept in to show that after it had died, it would not return to life, but would fossilize, leaving his features in the almost unreadable mask that the newspapers would come to know.

"I'm a good bit more than a trained

pilot," he said quietly. "The Foo is a means to an end. After I win the Vandenberg Cup, I can walk into any plant in the States—Douglas, North American, Boeing—*any* of them—and pick up the Chief Test Pilot's job for the asking. A few of them have as good as said so. After that—" His voice had regained some of its former animation from this new source. Now he broke off, and shrugged. "I've told you all this before."

The girl reached up, as if the physical touch could bring him back to her, and put her fingers around his wrist. "Darling!" she said. "If it's that *rocket* pilot business again. . ."

Somehow, his wrist was out of her encircling fingers. "It's always 'that *rocket* pilot business,'" he said, mimicking her voice. "Damn it, I'm the only trained rocket pilot in the world! I weigh a hundred and fifteen pounds, I'm five feet tall, and I know more navigation and math than anybody the Air Force or Navy have! I can use words like *brennschluss* and *mass-ratio* without running over to a copy of *Colliers*, and I—" He stopped himself, half-smiled, and shrugged again.

"I guess I was kidding myself. After the Cup, there'll be the test job, and after that, there'll be the rockets. You would have had to wait a long time."

All she could think of to say was, "But, Darling, there *aren't* any man-carrying rockets."

"That's not my fault," he said, and walked away from her.

A week later, he took his stripped-down F-110 across the last line with a scream like that of a hawk that brings its prey safely to its nest.

HE BROUGHT the Mark VII out of her orbit after two days of running rings around the spinning Earth, and the world loved him. He climbed out of the crackling, pinging ship, bearded and dirty, with oil on his face and in his hair, with food

all over his whipcord, red-eyed, huskily quiet as he said his few words into the network microphones. And he was not satisfied. There was no peace in his eyes, and his hands moved even more sharply in their expressive gestures as he gave an impromptu report to the technicians who were walking back to the personnel bunker with him.

Nan could see that. Four years ago, he had been different. Four years ago, if she had only known the right words, he wouldn't be so intent now on throwing himself away to the sky.

She was a woman scorned. She had to lie to herself. She broke out of the press section and ran over to him. "Marty!" She brushed past a technician.

He looked at her with faint surprise on his face. "Well, Nan!" he mumbled. But he did not put his hand over her own where it touched his shoulder.

"I'm sorry, Marty," she said in a rush. "I didn't understand. I couldn't see how much it all meant." Her face was flushed, and she spoke as rapidly as she could, not noticing that Ish had already gestured away the guards she was afraid would interrupt her.

"But it's all right, now. You got your rockets. You've done it. You trained yourself for it, and now it's over. You've flown your rocket!"

He looked up at her face and shook his head in quiet pity. One of the shocked technicians was trying to pull her away, and Ish made no move to stop him.

Suddenly, he was tired, there was something in him that was trying to break out against his will, and his reaction was that of a child whose candy is being taken away from him after only one bite.

"Rocket!" he shouted into her terrified face. "Rocket! Call that pile of tin a rocket?" He pointed at the weary Mark VII with a trembling arm. "Who cares about the bloody machines! If I thought roller-skating would get me

there, I would have gone to work in a rink when I was seventeen! It's *getting there* that counts! Who gives a good goddam *how* it's done, or what with!"

And he stood there, shaking like a leaf, outraged, while the guards came and got her.

"SIT DOWN, Ish," the Flight Surgeon said.

They always begin that way, Isherwood thought. The standard medical opening. Sit down. What for? Did somebody really believe that anything he might hear would make him faint? He smiled with as much expression as he ever did, and chose a comfortable chair, rolling the white cylinder of a cigarette between his fingers. He glanced at his watch. Fourteen hours, thirty-six minutes, and four days to go.

"How's it?" the FS asked.

Ish grinned and shrugged. "All right." But he didn't usually grin. The realization disquieted him a little.

"Think you'll make it?"

Deliberately, rather than automatically, he fell back into his usual response-pattern. "Don't know. That's what I'm being paid to find out."

"Uh-huh." The FS tapped the eraser of his pencil against his teeth. "Look—you want to talk to a man for a while?"

"What man?" It didn't really matter. He had a feeling that anything he said or did now would have a bearing, somehow, on the trip. If they wanted him to do something for them, he was bloody well going to do it.

"Fellow named MacKenzie. Big gun in the head-thumping racket." The Flight Surgeon was trying to be as casual as he could. "Air Force insisted on it, as a matter of fact," he said. "Can't really blame them. After all, it's *their* beast."

"Don't want any hole-heads denting it up on them, huh?" Ish lit the cigarette and flipped his lighter shut with

a snap of the lid. "Sure. Bring him on."

The FS smiled. "Good. He's—uh—he's in the next room. Okay to ask him in right now?"

"Sure." Something flickered in Isherwood's eyes. Amusement at the Flight Surgeon's discomfort was part of it. Worry was some of the rest.

MacKENZIE didn't seem to be taking any notes, or paying any special attention to the answers Ish was giving to his casual questions. But the questions fell into a pattern that was far from casual, and Ish could see the small button-mike of a portable tape-recorder nestling under the man's lapel.

"Been working your own way for the last seventeen years, haven't you?" MacKenzie seemed to mumble in a perfectly clear voice.

Ish nodded.

"How's that?"

The corners of Isherwood's mouth twitched, and he said "Yes" for the recorder's benefit.

"Odd jobs, first of all?"

"Something like that. Anything I could get, the first few months. After I was halfway set up, I stuck to garages and repair shops."

"Out at the airports around Miami, mostly, wasn't it?"

"Ahuh."

"Took some of your pay in flying lessons."

"Right."

MacKenzie's face passed no judgements—he simply hunched in his chair, seemingly dwarfed by the shoulders of his perfectly tailored suit, his stubby fingers twiddling a Phi Beta Kappa key. He was a spare man—only a step or two away from emaciation. Occasionally, he pushed a tired strand of washed-out hair away from his forehead.

Ish answered him truthfully, without more than ordinary reservations. This was the man who could ground

him. He was dangerous—red-letter dangerous—because of it.

"No family."

Ish shrugged. "Not that I know of. Cut out at seventeen. My father was making good money. He had a pension plan, insurance policies. No need to worry about them."

Ish knew the normal reaction a statement like that should have brought. MacKenzie's face did not go into a blank of repression—but it still passed no judgements.

"How's things between you and the opposite sex?"

"About normal."

"No wife—no steady girl."

"Not a very good idea, in my racket."

MacKenzie grunted. Suddenly, he sat bolt upright in his chair, and swung toward Ish. His lean arm shot out, and his index finger was aimed between Isherwood's eyes. "You can't go!"

Ish was on his feet, his fists clenched, the blood throbbing in his temple veins. "What!" he roared.

MacKenzie seemed to collapse in his chair. The brief commanding burst was over, and his face was apologetic. "Sorry," he said. He seemed genuinely abashed. "Shotgun therapy. Works best, sometimes. You can go, all right; I just wanted to get a fast check on your reactions and drives."

Ish could feel the anger that still ran through him—anger, and more fear than he wanted to admit. "I'm due at a briefing," he said tautly. "You through with me?"

MacKenzie nodded, still embarrassed. "Sorry."

Ish ignored the man's obvious feelings. He stopped at the door to send a parting stroke at the thing that had frightened him. "Big gun in the psychiatry racket, huh? Well, your professional lingo's slipping, Doc. They did put *some* learning in my head at college, you know. Therapy, hell! Testing maybe, but you sure didn't do anything to help me!"

"I don't know," MacKenzie said softly. "I wish I did."

Ish slammed the door behind him. He stood in the corridor, jamming a fresh cigarette in his mouth. He threw a glance at his watch. Twelve hours, twenty-two minutes, and four days to go.

Damn! He was late for the briefing. Odd—that fool psychiatrist hadn't seemed to take up that much of his time.

He shrugged. What difference did it make? As he strode down the hall, he lost his momentary puzzlement under the flood of realization that nothing could stop him now, that the last hurdle was beaten. He was going. He was going, and if there were faint echoes of "Marty!" ringing in the dark background of his mind, they only served to push him faster, as they always had. Nothing but death could stop him now.

ISH LOOKED up bitterly at the Receptionist. "No," he said.

"But *everybody* fills out an application," she protested.

"No. I've *got* a job," he said as he had been saying for the last half hour.

The Receptionist sighed. "If you'll *only* read the literature I've given you, you'll understand that all your previous commitments have been cancelled."

"Look, Honey, I've seen company poop sheets before. Now, let's cut this nonsense. I've got to get back."

"But *nobody* goes back."

"Goddam it, I don't know what kind of place this is, but—" He stopped at the Receptionist's wince, and looked around, his mouth open. The reception desk was solid enough. There were IN and OUT and HOLD baskets on the desk, and the Receptionist seemed to see nothing extraordinary about it. But the room—a big room, he realized—seemed to fade out at the edges, rather than stop at walls. The lighting, too...

"Let's see your back!" he rapped out, his voice high.

She sighed in exasperation. "If you'd read the *literature*..." She swiveled her chair slowly.

"No wings," he said.

"Of course not!" she snapped. She brushed her hair away from her forehead without his telling her to. "No horns, either."

"Streamlined, huh?" he said bitterly.

"It's a little different for everybody," she said with unexpected gentleness. "It would have to be, wouldn't it?"

"Yeah, I guess so," he admitted slowly. Then he lost his momentary awe, and his posture grew tense again. He glanced down at his wrist. Six hours, forty-seven minutes, and no days to go.

"Who do I see?"

She stared at him, bewildered at the sudden change in his voice. "See?"

"About getting out of here! Come on, come on," he barked, snapping his fingers impatiently. "I haven't got much time."

She smiled sweetly. "Oh, but you do."

"Can it! Who's your Section boss? Get him down here. On the double. Come on!" His face was streaming with perspiration, but his voice was firm with the purpose that drove him.

Her lips closed into an angry line, and she jabbed a finger at a desk button. "I'll call the Personnel Manager."

"Thanks," he said sarcastically, and waited impatiently. Odd, the way the Receptionist looked a little like Nan.

THE PERSONNEL Manager wore a perfectly-tailored suit. He strode across the lobby floor toward Ish, his hand outstretched.

"Martin Isherwood!" he exclaimed enthusiastically. "I'm *very* glad to meet you!"

"I'll bet," Ish said dryly, giving the

Personnel Manager's hand a short shake. "I've got other ideas. I want out."

"That's all he's been saying for the past forty-five minutes, Sir," the Receptionist said from behind her desk.

The Personnel Manager frowned. "Um. Yes. Well, that's not unprecedented."

"But hardly usual," he added.

Ish found himself liking the man. He had a job to do, and after the preliminary formality of the greeting had been passed, he was ready to buckle down to it. Oh, he—shucks?—the Receptionist wasn't such a bad girl, either. He smiled at her. "Sorry I lost my head," he said.

She smiled back. "It happens."

He took time to give her one more smile and a half-wink, and swung back to the Personnel Manager.

"Now. Let's get this thing straightened out. I've got—" He stopped to look at his watch. "Six hours and a few minutes. They're fueling the beast right now."

"Do you know how much red tape you'd have to cut?"

Ish shook his head. "I don't want to sound nasty, but that's your problem."

The Personnel Manager hesitated. "Look—you feel you've got a job unfinished. Or, anyway, that's the way you'd put it. But, let's face it—that's not really what's galling you. It's not really the job, is it? It's just that you think you've been cheated out of what you devoted your life to."

Ish could feel his jaw muscles bunching. "Don't put words in my mouth!" he snapped. "Just get me back, and we'll split hairs about it when I get around this way again." Suddenly, he found himself pleading. "All I need is a week," he said. "It'll be a rough week—no picnic, no pleasures of the flesh. No smoking, no liquor. I certainly won't be breaking any laws. One week. Get there, putter around for two days, and back again. Then, you

can do anything you want to—as long as it doesn't look like the trip's responsible, of course."

The Personnel Manager hesitated. "Suppose—" he began, but Ish interrupted him.

"Look, they need it, down there. They've got to have a target, someplace to go. We're built for it. People have to have—but what am I telling *you* for. If you don't know, who does?"

The Personnel Manager smiled. "I was about to say something."

Ish stopped, abashed. "Sorry."

He waved the apology away with a short movement of his hand. "You've got to understand that what you've been saying isn't a valid claim. If it were, human history would be very different, wouldn't it?"

"Suppose I showed you something, first? Then, you could decide whether you want to stay, after all."

"How long's it going to take?" Ish flushed under the memory of having actually begged for something.

"Not long," the Personnel Manager said. He half-turned and pointed up at the Earth, hanging just beyond the wall of the crater in which they were suddenly standing.

"Earth," the Personnel Manager said.

Somehow, Ish was not astonished. He looked up at the Earth, touched by cloud and sunlight, marked with ocean and continent, crowned with ice. The unblinking stars filled the night.

He looked around him. The Moon was silent—quiet, patient, waiting. Somewhere, a metal glint against the planet above, if it were only large enough to be seen, was the Station, and the ship for which the Moon had waited.

Ish walked a short distance. He was leaving no tracks in the pumice the ages had sown. But it was the way he had thought of it, nevertheless. It was the way the image had slowly built up in his mind, through the years, through the training, through the

work. It was what he had aimed the *Navion* at, that day over the Everglades.

"It's not the same," he said.

The Personnel Manager sighed.

"Don't you see," Ish said, "*It can't* be the same. I didn't push the beast up here. There wasn't any *feel* to it. There wasn't any sound of rockets."

The Personnel Manager sighed again. "There wouldn't be, you know. Taking off from the Station, landing here—vacuum."

Ish shook his head. "There'd still be a sound. Maybe not for anybody else to hear—and, maybe, maybe there *would* be. There'd be people, back on Earth, who'd hear it."

"All right," the Personnel Manager said. His face was grave, but his eyes were shining a little.

"**I**SH! HEY, Ish, wake up, will you!" There was a hand on his shoulder. "Will you get a *load* of this guy!" the voice said to someone else. "An hour to go, and he's sleeping like the dead."

Ish willed his eyes to open. He felt his heart begin to move again, felt the blood sluggishly beginning to surge into his veins. His hands and feet were very cold.

"Come on, Ish," the Crew Chief said.

"All right," he mumbled. "Okay. I'm up." He sat on the edge of his bunk, looking down at his hands. They were blue under the fingernails. He sighed, feeling the air moving down into his lungs.

Stiffly, he got to his feet and began to climb into his G suit.

The Moon opened its face to him. From where he lay, strapped into the control seat in the forward bubble, he looked at it emotionlessly, and began to brake for a landing.

He looked for footprints in the cra-

ter, though he knew he hadn't left any. Earth was a familiar sight over his right shoulder.

He brought the twin-bubble beast back to the station. They threw spotlights on it, for the TV pickups, and thrust microphones at him. He could see broad grins behind the faceplates of the suits the docking crew wore, and they were pounding his back. The interior of the Station was a babbling of voices, a tumult of congratulations. He looked at it all, dead-faced, his eyes empty.

"It was easy," he said over a worldwide network, and pushed the press representatives out of his way.

MacKENZIE was waiting for him in the crew section. Ish flicked his stolid eyes at him, shrugged, and stripped out of his clothes. He pulled a coverall out of a locker and climbed into it, then went over to his bunk and lay down on his side, facing the bulkhead.

"Ish."

It was MacKenzie, bending over him.

Ish grunted.

"It wasn't any good, was it? You'd done it all before; you'd been there."

He was past emotions. "Yeah?"

"We couldn't take the chance." MacKenzie was trying desperately to explain. "You were the best there was—but you'd done something to yourself by becoming the best. You shut yourself off from your family. You had no close friends, no women. You had no other interests. You were a rocket pilot—nothing else. You've never read an adult book that wasn't a text; you've never listened to a symphony except by accident. You don't know Rembrandt from Norman Rockwell. Nothing. No ties, no props, nothing to sustain you if something went wrong. *We couldn't take the chance, Ish!*"

"So?"

"There was too much at stake. If we let you go, you might have for-

gotten to come back. You might have just kept going."

He remembered the time with the *Navion*, and nodded. "I might have."

"I hypnotized you," MacKenzie said. "You were never dead. I don't know what the details of your hallucination were, but the important part came through, all right. You thought you'd been to the Moon before. It took all the adventure out of the actual flight; it was just a workaday trip."

"I said it was easy," Ish said.

"There was no other way to do it! I had to cancel out the thrill that comes from challenging the unknown. You knew what death was like, and

you knew what the Moon was like. Can you understand why I had to do it?"

"Yeah. Now get out before I kill you."

He didn't live too long after that. He never entered a rocket again—he died on the Station, and was buried in space, while a grateful world mourned him. I wonder what it was like, in his mind, when he really died. But he spent the days he had, after the trip, just sitting at an observatory port, cursing the traitor stars with his dead and purposeless eyes.



READIN' and WRITHIN'

(continued from
page 26)

In its revised form, "The Space Merchants", this novel is even smoother and more entertaining in plot, but I have not been able to read more than a few pages at a time before the background gives me the whillies.

Will the Senator from Nutra-Cola please take the floor?

WORLD OUT OF MIND by J. T. M'Intosh 222 pp Doubleday \$2.75.

I like the poker-game plot, with life or death hanging on whether the hero makes the right sequence of logical moves, and this book has enough of that.

The background is a pleasant world set-up—utopia compared to what we have now—with everything mild and moderate and pleasant and normal, except the one gaudily-different element of an aristocracy of abilities. It's put right out in the open, with a fascinating universal I. Q. puzzle-test, and badges of different color in the spectrum scale for those that test out on different IQ ranges. There is a democratic flavor to it, because the difference of job-treatment and respect given people wearing each color is largely a result of the experience of the population as to how people with such badges behave, rather than fixed law.

An attractive-sounding system for s. f. fans, whom I would naturally expect to get a better break in that kind of system and strut happily in red circle badges, or better.

The plot is the good old chestnut of the guy who can't remember, but finds himself in some kind of a deadly game as an

important piece; he has to apply his high-powered brains to finding out what kind of game it is and what side he wants to play on.

For a good puzzle-story, this puts the reader on par with the hero and they are equally surprised by whatever happens, and can solve the problems with the same evidence. Fair play.

The hero is a likeable character, rather human and pleasant, as are the other characters, although they are only lightly presented. He gets a little superdooper toward the end, but this is a small complaint for a smooth and entertaining book.

The jacket design is a dull looking mish-mash with no connection to the plot that I could figure out, but don't let the dullness of the outside deter you. In its reasonable English way, this is essentially a gaudy story, written to please.

HELLFLOWER, by George O. Smith, Doubleday, 265 pp \$2.75

A busted and disgraced spaceman is used as a decoy-duck to catch interplanetary drug-smugglers, trying to pull himself up by his bootstraps back to self respect and the respect of the world. There's considerable romancing, and occasional shooting. It's not always plausible toward the end, but keeps the pace going, and the suspense too tight for any leisure to pause and criticize. The solution seemed to me more of a rescue of the characters by George O. Smith than anything they

[Turn to Page 48]



Here is the second in a series of articles, which add up to one of the most significant essays written about science-fiction — published by your request.

THE PLOT-FORMS OF SCIENCE FICTION

A Special Survey

James Gunn

b. A distant world, space, or dimension in the present



IF THE PLOT-FORM of a modern man in the past is basically an adventure theme, that of a modern man in a distant world, space, or dimension in the present is even more so. In the former, the protagonist's sur-

roundings are part of our earth, part of our heritage; but in the latter, the environment is usually completely alien—or, when still on earth, is so inaccessible and strange as to be almost divorced from modern experience. The form, consequently, is a perennial favorite of both writers and readers, since it is both easy to write and straight, uninvolved, suspenseful read-

ing. The problems set by the plot usually involve physical difficulties and opposition; discovering the real nature of the environment; the old standby, survival; and finding a means of returning home.

The means of reaching the alien environment are so various that a complete summary is impossible. When the place is on Earth, the protagonist finds it, or is projected into it, occasionally by foot but more often by machine. Space or another planet are usually reached by space ship. Dimensions are almost always entered by accident—although sometimes ancient, forgotten entrances are rediscovered, or dimensional beings trap humans for purposes of their own. Occasionally the means is mystical or mental in nature, and in that respect approaches fantasy.

The form is so old that its beginnings are lost in prehistoric mists: Lu-

cian's works, mentioned in the preceding section, were of this type; myths often contained elements of it; medieval travel tales were basically plots of this kind; the fictional utopian works—the list is endless. In modern science fiction, one could include almost all of Burroughs' science fiction stories in this classification: the story mentioned earlier, his "Pellucidar" series,¹ and his novels laid on Mars² and Venus.³ In the "Pellucidar" books, first entry into a hollow world inside the earth is made by boring through the earth's crust in a newly-invented machine which emerges finally into a topsy-turvy world of innumerable strange tribes and beings. Later, Tarzan comes to the rescue by flying a zeppelin through a large hole at the North Pole. John Carter finds a similar, if more involved, situation on Mars, where the social progression is highly stratified by tribes—each tribe of a different color—and the civilization has degenerated from a previous peak. Carter gets to his adventurous destination by concentrating his thoughts on the red planet.

Many of A. Merritt's novels are of this type. In "The Ship of Ishtar",⁴ for instance, a mysterious rapport is established between the hero and an ancient, intricately-carved, miniature ivory ship; the hero falls into a fantasy-world of gods, goddesses, priests, priestesses, soldiers, and slaves of a dimensional Egyptian world. In "The Snake Mother" and "The Face in the Abyss"⁵ the modern characters, traveling by foot and pack animals, come upon an isolated region in Central America inhabited by a half-snake, half-human woman; ancient gods or powers; intelligent spider-like crea-

tures, and more or less normal humans. Another region is reached by foot, this time in the far North, in "Dwellers in the Mirage";¹ there the characters meet, in a mist-shrouded valley, peoples and places out of Norse mythology. In a final example, Merritt, in "The Moon Pool",² introduced his characters into a huge hollow world, reached via mysterious ruins on a strange island in the Pacific. The modern humans find there, among more ordinary persons, a strange, seductively-compelling life whose form is a swirling column of light, and an old and wise frog race.

Two more modern examples are "The 32nd of May" by Paul Ernst³ and "Goldfish Bowl" by Anson MacDonald (pseud. for Robert Heinlein).⁴ In the first, the protagonist, on the stroke of midnight, stumbles between two mirrors in his host's living room and finds himself in another dimension—a strange, geometrical place with hexagonal plants and warring beings in the shape of two-dimensional circles and triangles; after many minutes he finds his way back and discovers that the final stroke of midnight is still ringing. "Goldfish Bowl" describes the efforts of two scientists to solve the mystery of two permanent waterspouts which have sprung up near Hawaii; one of the scientists ascends a spout in a converted bathysphere, and the other is carried away by an electrical ball of fire. They meet in a prison-like room above the pillars of water, never seeing their captors; they finally decide that their captors are superior beings native to earth, that (as Charles Fort suggested) man is the property of some unseen race whose traces we notice in mysterious

1. "At the Earth's Core", Chicago: McClurg, 1922, etc.
2. "The Chessmen of Mars", Chicago: McClurg, 1922, etc.
3. "Pirates of Venus", Tarzana, Cal.: Burroughs, Inc., 1934, etc.
4. New York: Putnam, 1926.
5. New York: Liveright, 1933.

1. New York: Liveright, 1931.
2. New York: Putnam, 1919.
3. "The Best of Science Fiction" (hereafter referred to as TBSF), edited by Groff Conklin. New York: Crown, 1946. pp. 532-541.
4. *Ibid*, pp. 252-277

rains, disappearances, etc., but which science ignores. One of the scientists dies and his body is removed; but before the other dies he inscribes a cryptic message on the fore part of his body by continual scratching with his finger nail until scar tissue is formed. The message which, with his body, is found eventually in the ocean: "Be-ware—creation took eight days."

Alone, this plot-type has resulted in nothing particularly important to science fiction or the world at large. It can only echo, thematically, Shakespeare's "there are more things in heaven and earth, Horatio..." As the carrier for theme or symbolism, however, it has served in the past on occasion and shows promise for the future, but the plot type, even without embellishments, will probably remain a standard expression of science fiction's escapist function.

c. The future

A MODERN man in the future has provided a plot-type not quite so adventurous, although it has been used for that purpose on occasion. The stories of this classification, however, tend more to thoughtful or provocative analyses, to utopias and satires, to speculation about man's goal, possibilities, or destiny. A modern man enters the future with one primary question which both he and the reader demands to be answered: what will life and living conditions be like? Upon the answer depends the protagonist's attitude toward the new world: will it satisfy all his desires, and will he be satisfied to settle down and stay? Will there be something wrong which he can struggle to right? Or will the world be so fearfully alien or so irrevocably evil that he wants only to destroy it or escape from it?

Science fiction's view of the future through the eyes of a modern man has not been, on the whole, particularly cheerful. The utopia, generally, went out of style with Edward Bellamy's

"Looking Backward";¹ since H. G. Wells' "The Time Machine"² authors have taken, in such stories, the darker view of the possibilities of man's progressing toward any better life. There are reasons for this, of course, aside from purely philosophical ones. From the author's standpoint, a perfect world is not good story-material—nothing happens; a flawed or completely evil world provides a natural conflict, and is thus much better for his purposes. It is natural that he should choose to represent such a world when he decides to write about the future, since science fiction writers, like almost all writers of the past, are entertainers first and philosophers, if at all, second. And so, even when the world depicted has many attractive points in its favor, there are usually one or two strong drawbacks—most often culminating in the rebellion of the newcomer against the regimentation of a highly-organized society. All this, by the way, does not hold true for stories built around "a future being in a future world," where the characters have other problems than the nature of the society they live in and the viewpoint is quite radically different.

The future has been reached fictionally in many ways. In "Looking Backward" the hero was hypnotized, and slept in a vault for over a hundred years; in other works suspended animation has been achieved by drugs, machines, or natural forces. The use of the time machine is, of course, common, and occasionally a story uses a time "fault," natural passageway, or cataclysmic event to slip a character into the future directly.

One of the gloomy views is presented by Harry Bates in "Alas, All Thinking!"³ Here, a young genius is visited

1. *Op. cit.*

2. New York: Holt, 1919.

3. "The Other Worlds" (hereafter referred to as TOW), edited by Phil Strong. Garden City, NY: Garden City Publishing Co., 1942, pp. 251-294.

by an overly-Intellectual woman from the distant future and is taken forward with her, some three million years, to her own time. In mere boxes of rooms, the hero finds a few old, spider-like, mummified men, immobile and dusty, who, with their huge, supported heads, spend their lives in thought and contemplation and are fed by pellets shot by a mechanism into their mouths. Revolting against such a dusty prospect, the hero ends their lives one by one, thus closing the final chapter of the human race.

A slightly less dismal picture is suggested by Frank Belknap Long's "A Guest in the House,"¹ in which a family moves into a new home and accidentally activates time-travelling machinery which a former experimenting tenant had left behind. Out of a gray fog which surrounds the house steps a scrawny gnome who informs the father that they are half a million years in the future and that his race, stemming from atomic-age mutations, is taking over the time-travelling machinery. The gnome's designs upon the past are foiled and the house is returned to its normal time by the nine-year-old son of the family, an atomic-derived prodigy of I. Q. 270.

This fictional form has not, outside of a few interesting exceptions, been particularly important in the history of science fiction or very popular with its authors, and its place will probably continue to be minor. The gap between the present and the future is usually too great to encompass anything significant for modern humanity, and the form lends itself too readily to satire. Science fiction today is essentially anti-satirical, anti-utopian; it is realistic, and both tendencies lead in the other direction. In spite of this, an occasional amusing or satirical story of note may be hoped to come from the type.

2. An ancient being or primitive man in a modern human environment

THE ENTRANCE of an ancient being, or primitive man, into our modern era is a plot-type which has not often been used in modern science fiction and perhaps rightly so. What little the form has to offer is in the nature of comparisons of primitive ways of life and possibly intervening history with our life and times. Even as an adventurous plot it has drawbacks. There is, in the beginning, a difficulty in overcoming the tendency of the reader to identify himself with modern man and thus change it to a story about modern men in the modern world facing problems introduced from the past—since there is often only a subtle difference in emphasis separating the two types, even though the effects are quite distinct.

One such story, however, which is successful—although a large part of its success is due to its surprise-value and the theme it carries rather than any intrinsic quality in the plot itself—is Frederic Brown's "Letter to a Phoenix," which was discussed in the first section of this work. Another effective example, though for a different reason, is "The Gnarly Man" by L. Sprague de Camp,¹ which tells the story of a Neanderthal man who is discovered in a carnival by anthropologists. The principal attraction of the story is the recounting by the primitive man of his thousands on thousands of years of experience, and the events and societies through which he has lived—enlivened, on the side, by an abortive romance with a frustrated female-researcher among the anthropologists. The gnarly man's longevity was due to the mysterious and accidental effects of a lightning-bolt which struck close to him when he was a young man on a

1. "Strange Ports of Call" (hereafter referred to as SPC), edited by August Derleth. New York: Pellegrini & Cudahy, 1948. pp. 259-275

1. "The Wheels of If", Chicago: Shasta, 1948, pp. 194-222.

much younger Earth, and changed his structure so that he did not age. The Neanderthal man has survived so long because of his habit of effacing himself and moving to another region at regular intervals, before his agelessness is exposed; and this is what he does to escape his present predicament.

An interesting variation of a number of years ago is Thomas Calvert McClary's "Rebirth",¹ in which the primitive characters are not brought from the past but created. In this novel, a scientist decides that drastic measures are in order to sweep away the world's corruption; he invents and puts in operation a machine which obliterates all knowledge from the minds of the world's millions, thus giving mankind a clean slate upon which to write—a rebirth. The situation in which the characters find themselves is one of perennial fascination in science fiction; the miracles of modern technology available for any who are ingenious enough to make use of them; civilization, with all the luxuries and conveniences it holds and which most of us have a materialistic yearning for from time to time, unowned and waiting. Any number of stories have been built around such a situation, and one of the primary essences of its appeal is the reader's vicarious delight in the unrestricted enjoyment of material possessions. In "Rebirth," the situation enables McClary to comment effectively on the valuable arts of existence and the unnecessary excrescences of civilization. The experiment starts poorly, for mankind—without knowledge of fire, food, or any of the specialized knowledge necessary for urban life—reverts to the most primitive savagery. The remainder of the novel discusses man's rapid rise to a more civilized state.

The form has never been seriously explored by modern writers; some of the technical difficulties we have al-

ready noted, and the results are seldom sufficiently rewarding to overshadow them. Like the former type, it is essentially satirical, and it is doubtful now, with the current of realism in science fiction which has been largely responsible for much of its development, that anything significant will ever be done with it.

3. An Alien In A Human Environment

THE PLOT-FORM of the alien in a human environment has been used, like that of the preceding type, chiefly for comparisons, although there have been other, important philosophical applications. Satirists have turned frequently to the plot ever since its first application in Voltaire's "Micromegas" (1752)¹ in which Micromegas (a native of the star Sirius) as well as a native of the planet Saturn visits earth, which seems as small as a meteor to them. Modern science fiction has found the type as useful. As a general rule, the stories are more thoughtful and less adventurous than the preceding types, their interest resting on bases more intellectual and less emotional.

Fundamentally, the alien is a character who is almost completely ignorant of earth's physical facts, the characteristics of its people, and the nature of its civilization. He is an outsider, to whom everything is new and by whom nothing is taken for granted, from those truths we accept as axiomatic through our most deep-grained beliefs to the mores of our culture. Unlike the primitive being, he is an entity with a background of culture—and possibly superior culture at that; at times, he is liable to short-sighted judgments, due to his unfamiliarity with the situation.

In modern writing, the alien almost always reaches Earth by space ship,

1. New York: Bartholomew House, 1944.

1. London: D. Wilson and T. Durham, 1753.

although occasionally writers hark back to Voltaire for such mystical means of transportation as light-pressure or thought-waves. The latest fad, in magazines which like to appear as current as today's newspaper, is the flying saucer.

a. The past

MODERN authors have not been particularly fond of placing their aliens in the past; there, possibilities of comparison are limited, and satire is not as immediate or as pointed. When such a situation is used, it is usually tied in with human history or mythology to give the story an air of plausibility or a philosophical application. A number of stories, for instance, have tried to explain the presence or evolution of humanity by emigration and later degeneration of an alien race, or by alien experiments with sub-human life-forms (usually in such circumstances as to suggest reasons for the springing up of legends of creation, paradise, heaven, Satan, etc.).

A popular explanation of the mystery of Atlantis as the presence on earth of a pre-historic alien civilization is another example. The explanatory type of story has found places for all other ancient artifacts, ruins, and races as well—from the Minoans to the Egyptians, from the Chinese to the Mayan Indians. Anything the least strange or outlandish which has come down to us in legends or folk tales has been attributed at one time or another to aliens: the pyramids—built by aliens; magic—the misunderstood powers of aliens; mythological figures—the aliens themselves.

Such a concept figures in Oscar J. Friend's "Of Jovian Build,"¹ in which part of the action takes place in the past. Ancient Greek warriors find a spaceship from Jupiter and mistake it for a dragon before the Jovian within,

misunderstanding their intentions, annihilates them. The Jovians, the remainder of whom are in suspended animation, have been reduced in size from their normal giant stature by a machine which condenses their cellular structure, but the failure of the artificial-gravity machinery has fatally injured the pilot and he cannot revive his companions. Cadmus, founder of Thebes, arrives and courageously clammers into the ship, follows the instructions of the dying pilot in reviving the other Jovians, but then leaves in terror as he finds them increasing in size. The pilot realizes that the atmosphere is poisonous to his race and destroys the ship. Thus we have the explanation of the legend of Cadmus and the sowing of the dragon teeth.

Occasionally a plot of this type finds a place in a larger work. In "The Incredible Planet" by John W. Campbell, Jr.,¹ for instance, is an account similar to that above. Here, a spaceship crashes on earth with its crew of half-horse, half-man, centaur-like creatures; the crew, in an effort to repair the ship, impresses the labor of the surrounding, ignorant, scarcely human natives, but the attempts end in failure. One of the members of the party, with a name similar to Chiron, is sympathetic with the natives; over the years of his long lifespan endeavors to teach them the elements of civilization. So we have the legends of the centaurs and Chiron, the tutor.

Fictional explanations of another legend have been so frequent that such a story must be unusually well written to gain acceptance today: the legend—the fall of Adam and Eve in the garden of paradise. A fairly recent example is Eric Frank Russell's "First Person Singular,"² which tells the story of two pioneers from the planet Dize, who are set down upon the primeval earth to care for and watch the

1. "A Treasury of Science Fiction" (hereafter referred to as ATSF), pp. 407-418.

1. Providence, R.I.: Hadley Publishing Co., 1949.

2. TWS. Oct., 1950, pp. 78-103

native plants in a garden which had been carved out of the prolific surrounding jungle and protected by high, strong walls. The purpose is to see whether the flora essential to the welfare of the Disian race can survive on this primitive planet, and whether the Disian pioneers themselves can live here unchanged—prior to a general colonization. There is only one admonition: that the pioneers eat nothing native to this world lest they become changed beyond acceptable limits. Between the six year visits of the ship, however, things did change: some plants died, some lived, all changed, but most of all the preliminary colonists themselves changed: in minute ways, as in the appearance of body hair, and in psychological ways, as in increasing aggressiveness and combativeness. Eventually, because of a natural cataclysm which destroys their garden, they are forced to rely almost entirely upon native food and they change too greatly. The ship offers to return them to Dise for treatment, giving up this world as hopeless at present; the man, Edham, and the woman refuse, and they are abandoned. They leave the destroyed garden they had called Para-Dise, and they take their place in the native earth. They have children:

...all of their own shape but none truly of their kind.

The first was a murder.

The second, his victim.

The fifth had a yellow skin and tilted eyes.

Only the tenth had red hair.

The twelfth was born black.

But the seed of this breed subdued and mastered the stormy world which some call Terra. (1)

There is a basic reason why stories of this type have not contributed anything of importance to the development of science fiction and why they are unlikely to do more in the future. The stories partake of the nature of

their material; in explaining myths, legends, folklore, and ruins, they are, in effect, myths themselves, and realistic modern science fiction is at myth's opposite pole. The most pertinent question science fiction asks is not the why of the past but the whither of the present and the future.

b. The present

THE PRESENT is, as I intimated earlier, science fiction's favorite time for aliens to arrive on earth; there is an immediacy about the situation which translates itself into drama, suspense, and philosophical application. There is enough unexplained phenomena today—from flying saucers to mysterious disappearances—to provide a plausible basis for any number of stories about aliens in our society or even in our neighborhood; science fiction authors no longer feel the necessity of placing their aliens in secluded or poorly-populated sections of the globe, although it is still done occasionally. Obvious satire is seldom present in modern versions of this plot type; satire, to repeat an observation made several times before, is not compatible with realism. Philosophical observations, when present, stem directly from the plot, and, unlike early stories, they are seldom stated overtly.

In one of the best examples of the type, Harry Bates' "Farewell to the Master,"¹ humanity's anthropomorphic blindness is exposed. The story begins with the sudden arrival of a time-space machine in a large city at about the present time. From the machine step a metal giant and a man-like creature; the latter is immediately shot and killed by a fanatic. The robot-like being freezes into immobility, and it and the ship are placed in a museum. In the solitude of the

1. "Adventures in Time and Space" (hereafter referred to as AT&S), pp. 779-815.

night, however, the metal giant tries to recreate his human companion from the recordings of the man's speech made when he stepped from the ship—theoretically based, probably, on the suggestion that given one fact a good, philosophic mind could reconstruct in its entirety the universe from which it came. At last, with the materials for success at hand, over the misunderstandings and attempted interruptions of officials, the robot prepares to depart in the ship. He is asked to carry a message to his master, and the metal giant replies with what is one of the most effective final lines of any story: "You misunderstand. I am the master."¹

A story suggesting a different kind of visitor is "Expedition" by Anthony Boucher² (now co-editor of *The Magazine of Fantasy and Science Fiction*), which depicts the possibly disastrous consequences of man's native skepticism—a theme very common in science fiction recently, since several magazines have loudly championed the flying saucers and their extra-terrestrial origin. In Boucher's story, the insect beings of Mars, whose principal art form is the torturing and killing of other types of life, send an expedition to earth which lands in an American desert and meets a photographer specializing in desert photographs. After entering into communication, they are finally frightened away when the photographer shows them greatly enlarged pictures of an insect being killed by the huge hand of a man, and thus convinces them that he is actually a dwarf specimen of his race. After returning to our moon, however, the Martians realize that they have been tricked but are safe from discovery, since no one will believe the photographer even with his pictures. They can proceed to build up an invasion-

base on the other side of the moon, which is always concealed from man.

This story introduces a factor in science fiction which is assuming the nature of a symbol: the use of Martians to represent any kind of alien. To refer to an unidentified alien as a Martian began originally as a convenience, a tendency probably tracing its origin from Orson Welles' radio version of H. G. Wells' "The War of the Worlds,"¹ when the attention of the United States was focussed on Mars as the most probable invader. Ray Bradbury has doubtlessly used this kind of symbolism to the best advantage in his Martian stories,² but others have contributed to its growth and significance.

ONE STORY of this kind is Martin Pearson's "The Embassy,"³ in which a detective is approached by a man who insists that there are Martians on earth; he wants them traced. The detective is skeptical but, being well paid, agrees to accept the assignment. The two track down the Martians in New York by finding a private house which subscribes to every major paper and magazine (a convenient way to learn a great deal about earth), but they are frightened by the death of an agent they have had watching the house. They get drunk and disagreeable and are finally slipped a doped drink. When they are searched for addresses to which to send them, the address of the supposed Martian house is found. Arriving at the house conscious but paralyzed, the detective watches the Martians attack his client with unconcealed sadism, exclaiming with loathing, "That Venusian!"⁴

An example which carries this tendency even farther is Henry Kuttner's

1. *Op. cit.*, p. 815.
2. *TBSF*, pp. 740-751.

1. New York and London: Harper, 1893.
2. "The Martian Chronicles", Garden City: Doubleday, 1950.
3. *ATSF*, pp. 429-434.
4. *Ibid.*, p. 434.

"Don't Look Now,"¹ which build a surprising amount of suspense out of the conversation of two men at a bar. The conversation is, however, unusual, to say the least: one of the men (most conveniently referred to as One) nervously begins the conversation by leading up to a discussion of possible alien presences (Martians) on earth and finally confessing that he is convinced that there are such beings here. They pass as humans, he says, but actually, through their hypnotic powers, control almost everything that goes on. Their identifying feature is a third eye in the middle of their forehead which is undetectable except when they think they are not observed. The other man (Two) is amused at first, then incredulous, and finally, after his objections have been explained away, convinced by a picture One has snapped of a Martian in an unguarded moment. He admits, then, that he has had suspicions of such things for some time but has feared to mention it, not knowing who might be a Martian or under Martian control. They set a time for a further meeting, and Two gets up to leave. One, who had begun the conversation, opens his third eye in the middle of his forehead and stares after him.

There have been a number of stories in recent years built around alien invasions or reconnaissances of earth in which the aliens are defeated by forgetting, or neglecting to take account of, one minor fact. Such a story is Edwin James' "Paradox,"² in which the first human to reach the moon happens to be an ignorant, superstitious petty thief who drives the aliens—encamped on the other side of the moon, supposing that he is representative—mad with his twisted, inconsistent mind. Murray Leinster's "Nobody Saw the Ship"³ suggests a

one-being survey of earth which is foiled because the being ignores the insect population, and takes off with good news for his race only to find that the ship is ruined and his mission can only end with his death. A final instance is Eric Frank Russell's "Exposure,"¹ which describes an invasion by a race of aliens so malleable that it can imitate anything; the spaceship descends in a poorly populated district and the aliens proceed to imitate some of the humans they find. But when they go out into the world, they are quickly picked up. They had set their ship down in a nudist colony.

AN ELEMENT of satire still remains in occasional stories of this type as evidenced by Ross Rocklynne's "Jackdaw";² its characters are members of the oldest, wisest race of the universe, and their reason for being and greatest delight in life is the solving of puzzles of all kinds. They send their spaceships throughout the galaxy to seek out new puzzles and problems and prefer them complicated artificially, if necessary. (Which is to say that man's noblest aspect is his thirst for knowledge; after all, what is man's attempt to understand the natural laws of the universe, himself, and the nature and purpose of life but an effort to solve the greatest puzzle of all?) One "recreation ship" returns with a problem encountered on the third planet of a small solar system; there, they found the cities in ruins and one lone survivor in an airplane—a survivor with a toothbrush mustache and hair that falls down over his forehead, who, after attacking the ship with robot planes, finally crashes his own into it in a last suicidal mission. The exploring party which returns to the planet to solve the riddle applies several psychological axioms to the problem in order to translate the lan-

1. "My Best Science Fiction Story", *op. cit.*

2. *TWS*, Oct., 1949, pp. 135-144.

3. *Future*, May-June, 1950, pp. 40-49, 94-97.

1. *ASF*, July, 1950, pp. 107-123.

2. *TBSF*, pp. 764-785.

guage, such as: "the ultimate and even the direct purpose of all intelligent creatures is to solve puzzles" or "all intelligent creatures seek intelligently that relaxation of mind and body which is known as recreation and happiness," but neither of these works. The researchers play their trump card: "all intelligent creatures seek happiness by devoting themselves to the happiness of others entirely, forgetting themselves."¹ Using this axiom, the situation translates itself into a planet divided into sectors, each with a Captain of games; from time to time one sector would wage a game with another sector, not for its own enjoyment but for the enjoyment of others, and everyone would joyfully join in turning out materials for both sides. The last survivor had started the biggest game in history—but there the translation falls down. The old and wise race had to give up the problem in failure, commenting in the end on the vanity of a jackdaw which stole a jewel to glorify its nest.

This type of story, together with that following, seems to have an assured future in science fiction; it is dramatic and capable of great variety, and its flexibility makes it adaptable to any number of thematic messages. The one difficulty—and it is a large one—is making convincing the description of alien psychology and thought processes.

∴ The future

THERE IS little difference in plot-form between an alien in the present and an alien in the future. Most of the comments which apply to the preceding classification apply to the present one, except that the stories concern themselves more with future problems and the element of immediate application to our modern problems is not so often present. The type

itself probably originated in modern fiction.

The principal thematic trend in stories of this type is a glorification of humanity—not in its present state but in a possible future state of perfection which it has reached by long struggle. The philosophical position is, then, not anthropomorphic, but one which points out to mankind the way to a better life. A current attribute of humanity, usually minor and unnoticed today, is occasionally singled out as important in preserving mankind or establishing its superiority in the universe. Whatever the reason, these stories, unreasonable as it may be, have the effect of leaving the reader with a warm glow of satisfaction in belonging to the human race.

The perfection reached by humanity in Campbell's "Forgetfulness" has already been discussed in the first section of this work. A. E. van Vogt's "Resurrection"¹ is a story of similar nature, which begins with an expanding alien race landing an expedition on a ruined earth. The scientists, who have a means of reconstructing a living being from a piece of the skull, revive three men from remains in a museum; as soon as they have learned all they need from the men, they kill them. The fourth, however, disappears as soon as he is revived; he has almost complete mental control of matter, just as did Campbell's characters. The human race was destroyed, he later tells the aliens, by a vast nucleonic storm from space, ninety light years in diameter; the race had dispensed with spaceships; and, in any case, the only star with planets that had been discovered was in the path of the storm. The most important discovery of the alien race—and that by accident—was a machine for locating stars with planetary systems, an absolute

1. "The Other Side of the Moon", edited by August Derleth, New York: Pellegrini & Cudahy, 1949 (hereafter referred to as *TOSTM*), pp. 436-453.

1. *Op. cit.*, pp. 781-782.

necessity for a stellar civilization in a galaxy where (so our astronomers theorize) only one star in 200,000 may have planets. This locator and the resurrection machine were the first missions of the revived human when he disappeared; with them in his possession, he could not only resurrect the rest of the human race but it would make possible the galactic civilization the race could not found before. The aliens remain a menace; they can bring down destruction on earth before the race is ready if they can get the news back. But the man tricks the aliens into leaving, and finally destroying themselves, in the belief that they are keeping their devices from him.



A SLIGHTLY different type of story, one that might best be described as gentle satire touched with sentiment, is Robert Moore Williams' "Robot's Return,"¹ which describes an expedition of robots to a desolate earth and its attempts to solve the riddle of the death of the world in an effort to discover the mysterious origin of the robots themselves. Anthropomorphism gets a few subtle digs in the

robots' efforts to find metal forebears and their attempts to trace a line of descent from simple machines to themselves, but finally they are forced to the conclusion that chemical life must have built them.

Arthur C. Clarke's "Rescue Party"² contains the greatest amount of that somewhat illogical glow of pride in humanity described above. The author postulates a galactic civilization, led by a race which has been lords of the universe since time began and composed of every race, of sufficient civilization, in the galaxy. These races have constituted themselves as guardians of life in the galaxy and inspect each solar system once every million years. But in the "incredibly short time" of 400,000 years, intelligent life has appeared on a planet of a sun about to become a nova. A huge spaceship is sent to rescue what members of the race remain, but they arrive on earth to find the land already burned to a crisp, the world completely deserted—nothing remaining but an enigmatic tower apparently broadcasting aimlessly into space. They leave, just before the sun's explosion, still puzzled about the absence of people. Not until they are deep in space does it occur to them that the tower might have been broadcasting television pictures of the nova and its results to the remnants of the race who have escaped in ships. Incredible as this sounds to the members of the rescue party, who have never heard of any race achieving space flight in less than three thousand years after the discovery of radio waves—much less in two centuries, they follow the line of direction of the radio beams and find thousands of huge reaction-rocket spaceships. The attempt to cross interstellar space would take centuries and only the descendants of the original voyagers could hope to reach their goal. The

1. *AT&S*, pp. 687-697.

2. *ATSF*, pp. 496-517.

leader of the rescue party turns to his second in command:

"You know," he said to Rugon, "I feel rather afraid of these people. Suppose they don't like our little Federation?" He waved once more towards the star-clouds that lay massed across the screen, glowing with the light of their countless suns.

"Something tells me they'll be very determined people," he added. "We had better be polite to them. After all, we only outnumber them about a thousand million to one."

Rugon laughed at his captain's little joke.

Twenty years afterwards, the remark didn't seem so funny. (1)

The scope of the type is limitless,

and so are its possibilities. If at times the stories seem somewhat inconsequential and without great meaning to our modern day, it is not because they have to be so. If science fiction's future lies anywhere, it lies in the opposite direction, toward greater meaning, greater significance. In this respect, the present type has, at least, great potentialities.



1. *Op. cit.*, p. 517.

READIN' and WRITHIN' (continued from page 36)

worked out for themselves, but who cares? Good straight adventure.

—Katherine MacLean

HERMITAGE HOUSE, Inc., is the publisher of L. Sprague de Camp's "Science Fiction Handbook", which is one in a series; the publishers aim to build up a professional library for writers.

Their case is well-stated in the "Note on The Professional Writers Library", page 7. Remarkable the need for such a series, it is asserted that, "The texts on composition, rhetoric, grammar which the writer studied in school and college are not adequate. They cling to an artificial treatment of the forms of discourse and resist the natural processes by which language grows and changes. Of the unacademic texts on writing, many have assumed a beginning writer, a rank amateur, as their sole reader, and they have not even served him well. They have been properly viewed with scorn by the professional as hack-manuals by inept rhetors."

From my own experience, I would say that this is no exaggeration; with the exception of Jack Woodford's "Trial and Error", and Scott Meredith's more recent, and better, "Writing To Sell", I've seen little that I could recommend to either the beginner, or the writer who has sold some work, but isn't sure why. And, since no other volume of this nature exists (a couple of symposiums on science fiction and science fiction writing have appeared, but neither offers anything in the nature of an organized and integrated definition of the field and its requirements), this

volume is unprecedented.

Let me say, without further preamble, that the book achieves its purpose splendidly. While the meat is instruction on science fiction writing *qua* writing fiction in general, the fact remains that the field does contain special aspects with which a beginner—either a beginning writer, or a writer who's beginning science-fiction—must be familiar. Thus the first six chapters offer a brief but solid definition of the field, outlining its special differences; this is collated with a valuable bibliography, both of published science fiction and scientific texts, in the back.

I found but one error in the book, and that a minor one; however, for the record, it should be stated that John Michel had no part in the litigation mentioned on page 138.

The specific market requirements are of course, that part of any such book which will go out of date first; the author feels that his information will remain reasonably current for some years to come, though warning readers not to take his listings for granted. I suspect that there will be more and earlier alterations than Sprague does—but tomorrow and tomorrow and tomorrow will prove which of us is right.

In the meantime, I intend to re-read this book for my own instruction, and urge all of my fellow authors who have not already reached the stage of ultimate perfection, and 100% sales from here to obscurity, to do likewise.

RWL



The "Professor" had braved great perils to reach Earth, and believed he knew what he was up against. But he hadn't counted on the menace of Fatty Schultz and Irv Lece.



THE UNWILLING PROFESSOR

by Arthur Porges

(illustrated by Milton Luros)

ON THAT fateful afternoon Fatty Schultz and Irv Lece had cut their last classes, and were taking a gloomy walk together, scrambling through the scrubby brush well behind the athletic field.

There were good reasons for their unhappiness. Fatty was failing in Calculus II with a velocity that varied directly as the square of the number of lectures attended. Irv's math instructor had informed *him*, with a kind of loathing respect, that his only salvation lay in recommencing the study of arithmetic—taking five or ten years in the process—and then retiring to

a cave for perhaps another fifteen in the vain hope of digesting, through meditation and prayer, the multiplication table. After that, Irv might be ready for elementary algebra, but not, the professor hoped to a merciful God, in this unfortunate institution of higher learning.

As a matter of fact, the whole of their fraternity, Omega Pi Upsilon (usually referred to on campus as "Oh, P-Yu") was in the same boat regarding almost every subject offered at Bateman College. Bateman had courses that ranged from Aardvark Breeding to Zythum Brewing, but no

field of knowledge troubled them more than mathematics.

Hence the long face on Irv Lece. Fatty's visage also strove to elongate, but simply wasn't built for such an accomplishment. Instead, his piggy little eyes, ordinarily glowing with a kind of coarse good-humor, were now smouldering with resentment.

They had just seated themselves in a small clearing, where Fatty, after setting his calculus text on a grassy mound, began to heave rocks at it, when there was a whistling scream, a jarring *whump*, and before their bulging eyes a small disc lay crumpled, barely ten yards away.

A shrill creaking came from this odd craft, which looked like a man-hole-cover some eight feet in diameter, and twenty inches thick. Then, as they stared in wonder, a badly-sprung port opened crazily, and a small rabbit flopped out. It may be stated here that the creature was not actually a rabbit, but that any difference between the disc's pilot and an ordinary cottontail was imperceptible to the naked eye.

For a moment the rabbit swayed drunkenly, its big eyes cloudy, then it hopped towards Fatty, preferring, perhaps, his larger gravitational field over Irv's. Extending one snowy paw, it squeaked: "Good afternoon, gentlemen. Permit me to introduce myself. I am a good-will ambassador from Venus, and by your conventions should be addressed as 'Professor.' My name," he added a trifle pompously, "is Iglowt P. Slakmak, and I hold degrees comparable to your PhD, LLD, and M. D." All this in a very British accent.

Fatty gave a hoarse croak; Irv's knees knocked together.

"Come," the rabbit chirped, "chin up, fellows! There's nothing to be afraid of. I speak English because we've been monitoring your radio broadcasts for years. Television is a bit trickier, but we've seen a few. And

by listening to educational programs, I've learned a great deal about terrestrial culture, which I notice is based upon cigarettes, used cars—but never mind that, now. I must get to Washington and present myself. A rival of mine is about to contact Mars for the first time, and I hope to send in my report on Earth first." He peered at them anxiously. "You do understand me, chaps, don't you? I learned the best English from B. B. C., you know."

SEEING that the two boys were still dumb, the rabbit, with a mighty effort, picked up the three-pound calculus text, which was bound in a revolting green. As he did so, a paper fluttered out, and the professor deftly scooped it up. He studied Fatty's messy scrawlings for a moment, then said warmly: "Ah, I observe that you chaps are beginning the study of elementary mathematics." He shook a paw waggishly. "The limits are wrong on this integration: they should go from pi-over-two to pi-over-three first, instead of to zero. There's a discontinuity at pi-over-three, and your result, that the center of gravity of this six-inch cube is nine feet to the right, looks somewhat implausible."

At this, Fatty finally found his voice. "A discontinuity?" he gulped. "Whassat?"

"Aw, you know," Irv rebuked him. "Old Cusp's been gassing about 'em for days, now."

"Has he? Well, what is it, if you're so smart?"

"I don't remember," Irv said brazenly, "but at least I heard the name before."

"At pi-over-three," the rabbit broke in with authority, "the denominator of the integrand vanishes. To put it loosely, the function becomes infinite."

Fatty looked at Irv; Irv gaped at Fatty. The piggy eyes lit up. "A rab-

bit that knows math!" Fatty breathed.

"Knows it! He wrote the damn book—a real brain!" Irv exulted.

Once again their eyes met meaningfully. "You always said," Irv remarked in an abstracted manner, "that you could lick the guy who invented calc."

"I sure can," Fatty asserted, "but—" He paused; then with a speed surprising in one of his bulk, his thick hands shot out, and Professor Slakmak, the eminent Venusian savant, found himself dangling by the ears from stubby, freckled fingers. He kicked with a vigor shockingly undignified.

"Let me down!" he squeaked furiously. "This is outrageous. A friendly ambassador's person is sacred among all civilized peoples; your national President shall hear of this insult!"

Fatty looked at him, showing uneven teeth in a loose grin. "Bugs Bunny," he gloated, "you are now the official mascot of Omega Pi Upsilon!"

"I second the motion," Irv said, shuffling in excitement.

"We'd better hide his ship, though," Fatty cried, full of ingenious intelligence now that nobody was grading him for it.

"It's too big, ain't it?" Irv replied doubtfully. "Simmer down you!" he ordered the writhing professor. "We don't wanna choke you, but—" The captive subsided, contenting himself with little quivers of indignation.

"It's awful light," Fatty muttered, shoving the damaged saucer with one size eleven shoe. "We'll move it over here, pile a lot of brush on top, and—"

"—Start a fire!" Irv interrupted joyously.

The professor gave a piercing squeal of protest.

"No, stupid," Fatty told him, winking. "If the prof here helps us out this semester, we'll give him back his old disc, right?"

"Right," Irv agreed, crossing two fingers.

In fifteen minutes, even with Fatty working one-handed, the ship vanished under a pile of stiff brush. "That's that," Irv said, taking a deep breath. "Now—"

"We can't take him like this," Fatty remarked, swinging the professor by his ears and giving him a shake by way of emphasis.

"Why not? We just been rabbit-hunting, that's all."

"Too risky. Even if the professor keeps quiet, some joker from another frat might get nosy."

"He'll be quiet," Irv said grimly. "I know how to hit a rabbit on the neck with the edge of my hand—" Here the professor began to kick frantically, and Fatty snatched his hind legs, holding him rigid from ears to toes.

"There's an old cardboard box back there," Fatty said. "That'll do the trick."

A few seconds later the sullen captive was stuffed unceremoniously into a damp, mouldy container, and the two students returned to the campus, their hearts free from mathematical worries.

"The frat will owe us plenty for this," Fatty said darkly. "We've never had anybody to coach us in math."

"They'll be licking our boots," Irv agreed. "But they always have, the poor dopes!"

THAT NIGHT the professor, poorly refreshed by some wilted carrot tops and water, found himself in a circle of eager Omega Pi Upsilon's, delivering a detailed lecture—mostly problem-solving—on Section 45 of Broota's "Introduction to the Elementary Rudiments of the Differential and Integral Calculus."

He was a good teacher, and when either his enthusiasm or expository art faltered, Fatty revived it quickly with a sharp pinch or stinging slap. So,

although the average I. Q. of the fraternity was seventy-six, a certain amount of mathematics get through; and it was almost midnight before the unhappy ambassador found himself lying in a dirty, fetid cage, formerly the residence of the fraternity parrot, who had expired for lack of intelligent dialogue to copy. Rabbits, even Venusian ones, cannot weep, but the professor's soul was heavy within him.

And so it went, day after day, week after week.

"I am quite amazed," Professor Cusp told a skeptical colleague towards the end of the term, "at the remarkable way Schultz and his Oh P-Yu bunch have improved. Their homework these last six weeks has been excellent."

"Somebody's coaching them—or doing it outright," was the cynical reply. "I find no improvement in their zoology."

"No, that's what I suspected at first, but it can't be true. For example, on last week's extra credit problem—a real stinker—they turned in over a dozen correct solutions, all different. Nobody would go to that much trouble for the P-Yu crowd; they're about as popular on campus as Malenkov is with the D. A. R."

Another colleague, who had been listening, demanded: "But you won't let Fatty Schultz by, will you?"

"I'll have to," Cusp admitted. "Even though his exams are still horrible, I give quite a bit of weight to good homework, so—"

"You swine!" the other said sourly. "Now I'll get him."

Cusp laughed. "Ah, but you're supposed to be tough; they're afraid of you."

"They'd better be. It's a pity the biology lab has to experiment on poor chimps while we give degrees to anthropoids like Fatty!"

THAT NIGHT Fatty told his unwilling mascot the bad news. "I'm

sorry, Prof," he said genially. "It's only one more term, then I'll be done with math, and you can go back to your disc. By my last course is with old Totient, and he's rough."

"You promised!" the professor squealed angrily.

"This time I mean it, honest."

"Hey, Fatty," a fraternity brother objected, "ain't you gonna leave the prof to our gang? Just cause *you're* through—" He broke off in confusion as Irv kicked his ankle, hard.

"Ignore the jerk," Lece reassured the crestfallen rabbit. "When Fatty and I finish our math requirement, you're on your own again. Course, you'll have to promise not to tell the President!" Over the professor's head he winked broadly at his friends.

"I won't do it! It's a cad's trick!" The rabbit's brown eyes were bright with rage.

Fatty pawed his soft fur with one lardy hand. "C'mon, Prof, be a sport," he urged, greasily affectionate. "We like you a lot. You wouldn't let us down now."

"I—will—not—do—it! You promised—"

"You will, too!" Irv grunted. "Don't give us any backtalk. If I have to twist your ears—"

"Use the cigarette lighter," somebody suggested, half ashamed. "He's only bluffing again."

"I'm not," the professor said sturdily. "You can burn me, kill me, but I won't tutor this bunch of cretins any more!"

"Where does he get those words?" a student wondered aloud. "What's a cretin?"

"Irv," Fatty said in a sly, buttery voice, "where's that nasty pooch who adopted the Delts last week? The one that chased the chaplain into Tom Paine Hall. I'll bet he's a first class abbitray oundhay."

"Mac," Irv addressed a slender, dark boy, "they keep him in that shed



by the athletic field. Go and—ah borrow him, will you?" Mac left.

"What's an abbitray oundhay?" the professor quavered.

"You'll find out!" Fatty told him grimly. "Don't they teach pig-latin on Venus?"

There was a strained silence, while some members of the group whispered protests. But there was no open resistance. Fatty and Irv ran Omega Ph Upsilon with an iron hand.

Then the door opened, and Mac, tugging hard at the collar of a large dog, lurched into the room. "Here's Hotspur," he grinned, as the brute strove to mangle the cowering professor.

Hotspur was a canine melting pot. The Spitz in his ancestry seemed to predominate, but there were plain traces of airdale, setter—and crowning evidence of some mis-alliance—dachshund. White teeth bared in a slavering snarl, the dog glared at the rabbit, lunging against his collar as Mac held hard.

But the professor had collapsed, all

his courage gone. "A dog!" he gasped in horror, and Hotspur seemed startled at the human voice emerging from a rabbit. A thin whimper came from the professor. "Take that monster away," he begged. "I'll do anything—anything!"

"That's better," Fatty chortled. "But we need this good ol' hound more than the Delts do. Put him down in the basement—just in case." He eyed the professor, who shrank into a furry, abject heap.

"My new prof, Dr. Totient, is tough," Fatty said. "Bugs Bunny here is gonna have plenty to do. We'll clear out now and let him prepare his assignments! See that you watch those signs," he jibed, handing out what he had so long received. He fastened the rabbit's chain to its stout staple in the wall. "Here." He fished an apple core from his jeans, and tossed it at the professor, giving him an oily smirk. "Just to show there's no hard feeling. Eat hearty!" He stumped out, followed by his companions.

GRADUALLY it grew dark, and the deserted fraternity-house was quiet. Ravenous, the professor finally nerved himself to nibble the apple core, which to his sensitive nostrils reeked of Fatty. He had just downed the last noisome fragment, when there was a loud, inquisitive sniff at the door. He grew rigid. Another sniff and the shoulder thrust of a heavy body.

Insecurely shut, the door swung open, and a huge, white form stalked in. The professor cringed, moaning a little, the hot alien scent of dog in his nose, prepared to meet a terrible death.

"Ssst!" the big mongrel admonished him. "I'm a friend," he rumbled in slow, thick English. Trotting over, he took the slender chain in his great teeth, and threw his thirty pound body into the wrench. The staple pulled free.

"Let's get t'hell out of here," he grunted, "while your bunch is gone."

"B-but my ship," the professor stammered, staring in bewilderment. "It's broken down, and those two awful boys will find me before I can fix it."

"Never mind; I'll give you a lift in mine. I'm heading for Washington, then I'll have to report back on Mars. I can drop you either place. I just got word myself, only a few days ago, that our two planets had finally made contact. They asked me to find out where you'd disappeared to, but I never dreamed you were here. When I heard you talking English—! But we'd better scoot. I've spied out this place long enough—I don't think it's quite representative."

They had just reached the brush behind the library, where the profes-

sor's passionate story was completed, when Hotspur, looking back, saw lights flash in the fraternity house windows.

"Wait here," he said cryptically. "Be right back." He sprang into the brush, and vanished. A few moments later, the anxious professor heard some yells of agony coming from the campus, and before long Hotspur returned, panting.

"I know you'll get a sympathetic hearing in Washington," he gasped; "and we Martians abhor violence, but there are times—" He rubbed one paw against his mouth. "I didn't like the taste of Irv, but Fatty's even worse! I hope," he added viciously, "they have to take Pasteur treatments!"

"Me too!" Professor Slakmak agreed cheerfully. "And best of all, they'll flunk math—but good! Where's your ship—Pal?"

Humanity was protected —

from violence,
from emotion,
from everything
else that might
be disturbing
or controversial.

*don't miss this
biting Novella*

Rx: Jupiter

Save Us

by Ward Moore



FUTURE

SCIENCE FICTION



INSIDE SCIENCE FICTION

A Department For The Science Fictionist

by Robert A. Madle

SCIENCE FICTION SPOTLIGHT

NEW S AND VIEWS: Higher education's recognition of contemporary science fiction appears to be unlimited. The University of Michigan, on July 30th, held a public lecture on Science Fiction—with a panel consisting of a Professor of Physics, Chairman of the Department of Astronomy, Assistant Professor of English, and Dean McLaughlin, professional sf writer. ... The University of California recently had a month-long exhibition of science fiction books by such writers as Kuttner, C. L. Moore, Chad Oliver, Bradbury, Huxley, and others. ... And Drexel Institute of Technology (Philadelphia) offers an elective course in "Imaginative Literature"!

Marvin J. Edwards (of Camden, N. J.) writes us of a title which was triplicated—not simultaneously, however. "Full Circle" by Hugh Raymond (John B. Michel) appeared in the February, 1943 *Future*. H. B. Hickey's offering was in the initial issue of Howard Browne's *Fantastic*, and it appeared again in *Fantastic Universe* (Issue No. 2) with a Richard Matheson byline. ... Vernel Coriell, Edgar Rice Burroughs fan extraordinary, had a long letter in the 7/4 issue of *Colliers* showing Thomas Wood how inaccurate was his information for the latter's 5/9 article, "He Tarzan—You Fan".

How many readers are aware that Boucher's "discovery," Idris Seabright, is really Margaret St. Clair? ... New York fandom, many years divided, is now in the process of unity. The actual mechanism of unity is now being discussed by New York fans chiefs. ... Julius Unger, sf

magazine dealer, tells us he received so many requests for the magazine version of "Skylark of Space" that he was compelled to publish it himself in book form!

Science fiction was created at a recent Philadelphia Science Fiction Society meeting. Harold Lynch (along with assistants Will Jenkins and Lyle Kessler) acted out introductory scenes. A panel consisting of L. Sprague de Camp, Milton A. Rothman, and Ben Chorist then completed the stories. Strange and varied indeed were the extemporaneous scientification plots created by this imaginative trio.

Wm. D. Knapheide, of San Francisco, queries: "I noticed in your column in *Dynamic Science Fiction*, p. 128, you list Allen Glasser as editor of *The Time Traveller*. In "The Fantasy Fan," *Science Fiction*, October, 1939, p. 116, Julius Schwartz is listed as editor. How come the discrepancy?" The answer is that Schwartz was Associate Editor; Allen Glasser was Editor. The author of the article in *Science Fiction* may have been confused in that Julius Schwartz was Editor of *Science Fiction Digest*, which appeared after *The Time Traveller*.

Harold Lynch, who sold his first story to McComas and Boucher, ("Artists at Work"—F&SF, April, 1952) has just completed another short story, "Age of Retirement". ... The following advertisement appeared in a recent issue of the *New York Times*: "EDITOR, science fiction media, fully comprehensive for complete magazine. Excellent oppty." We never thought the day would arrive when sf editors were sought through newspaper advertising.

FROM THE World of Books: Chamberlain Press is the most recent entry into the book publishing field. Alan E. Nourse, top-flight writer and s-f fan, is associated with Chamberlain in an administrative capacity. Their first release will probably be an anthology of Richard Matheson stories. ... Speaking of Matheson, it is rumored that Dick (who has written short stories exclusively) is now at work on his first novel. ... Other novels in the creation stage are by Garen Drussai and collaborator, who are slanting one for that big \$6500 s-f contest; Mark Clifton and Alex Apostolides, who are writing one for Ballantine Books; and Chad Oliver, who has just commenced a 60,000 word epic, tentatively titled, "Community Study". ... Finney's famous "Circus of Dr. Lao" will be included in Ray Bradbury's second collection of stories for Bantam Books. ... Raymond F. Jones' "This Island Earth" has been selected by Doubleday for their book club. ... Donald A. Wollheim is the latest to write a juvenile for Winston.

The next "Prize Science Fiction" will include Richard Matheson's "Mother by Protest". ... August Derleth is now editing a new annual, "The Best of Fantasy." The initial one will include John Anthony's "The Hypnograph". ... Recent bargains are Jack Vance's "The Space Pirate" (Toby Press) at 25¢; also 35¢ are two Ballantine Books: "The Secret Masters" by Gerald Kersh and an excellent Kuttner anthology, "Ahead of Time"; Pocketbook #943 is "Planet of the Dreamers" (formerly "Wine of the Dreamers") by John D. MacDonald; and, although not science fiction, we enthusiastically recommend Edith Hamilton's "Mythology," a beautiful 50¢ reprint from Mentor Books.

The Scientifilms: Film producer Jack Seaman, whose "Project Moon Base" (based on a Heinlein original) is about to be released, is interested in E. Everett Evans' unpublished novel, "Stairway to Mars," for filming. ... Jim Nicholson, active member of the first fandom and Vice-President of the Boys' Scientifiction Club in 1930, has co-authored "Target-Earth!", a science fiction film now in production. ... Another formerly active fan, Len Moffatt, is co-author of a television play, "Father's Vampire," which may star Bela

Lugosi. ... "Slan" may soon appear on the screen! Lee Garmes, who recently won an Oscar for his camera proficiency, is a member of a group more than casually interested in it.

THE FAN PRESS

ALTHOUGH very little was stated concerning fan magazines in previous editions of this department, we are now in a position to feature them regularly in "Inside S-F." This department, as many readers already have noticed, now also appears in *Future Science Fiction*. Consequently, we have more space than we were previously allotted—therefore, a section devoted exclusively to the fan press.

A very attractive multi-lithed publication is *Torquasian Times* (25¢ a copy from 1041 Cayuga Street, Santa Cruz, California). The current issue, unfortunately marks the demise of the *Times*, but it is recommended nonetheless. It contains 56 neatly made-up pages and a pleasing assortment of material. There is an intriguing symposium on "Science Fiction and Fascism" by Peter B. Klein and Harvey Gibbs; David H. Keller speaks of "The Philosophy of Age," and Russell Watkins says, "Let's Clean up Fandom." For those who like fiction in their fanzines, this issue contains no less than five short-short stories.

A recent addition to the already-overcrowded fanzine field is *Fan To See* (10¢ from Larry Touzinsky, 2911 Minnesota Avenue, St. Louis 18, Mo.). This well-minneographed publication is more of the "inner-circle" type as the majority of the articles concern the fan world itself. However, there is enough to interest the general reader here. In fact, Harlan Ellison's "Dear Mr. Editor" reviews the lead stories from the various professional magazines—and reviews of the "prozines" are not overly-abundant in fanzines.

A publication which can be termed a "semi-pro" (and which is heartily recommended) is *Fantastic Worlds* (30¢ from Sam Sackett, 1449 Brockton Avenue, Los Angeles 45, California). Along with a short story by A. Bertram Chandler, the current (Summer) issue contains Robert Bloch's "Calling Dr. Caligari," a discussion of horror and fantasy films, replete with scenes from such classics as "The Phantom of the Opera" and "Dracula." Give this one a whirl!

An interesting little publication is *Comet Fire* which, although printed several years ago, has just been brought to our attention. This is a collection of poetry by Marvin Edwards, many of which are in the fantasy and science fiction category. The contents includes "An Ode: 3053 A.D.," "The City of Tomorrow," "Comet Fire," and many others. Professionally



printed, this brochure of verse is obtainable from the author at 1052 Merrimack Road, Fairview, Camden 4, New Jersey. Price: 25¢.

Please note the following change in address: all fan publications for review should be sent to Robert A. Madle, 1825 Academy Street, Charlotte, North Carolina.

TWENTY YEARS AGO IN SCIENCE FICTION

LAST ISSUE we discussed the revival of *Astounding Stories* under the Street & Smith banner. As indicated, the first of the new *Astounding* was a strange conglomeration of weird fiction, adventure stories, and a few straight sf yarns. The new editor, although not listed, was F. Orlin Tremaine. Many readers were quite dismayed at the appearance and assortment of stories contained in the October, 1933 issue; and, as science fiction fans are wont to do, they deluged Tremaine with letters of criticism and suggestion.

The November issue wasn't much of an improvement. It contained 144 pulp-size pages, with a cover by Howard V. Brown illustrating Murray Leinster's "Beyond the Sphinxes' Cave." The cover story was a so-so novelette concerning a Grecian cave which was replete with all of the creations of Greek mythology. This story could hardly be included in the genre of science fiction. There were other weird misfits with such titles as "The Lovely Ghost," "In the Shadow of the Tii," "The Man from Cincinnati," and "My Lady of the Tunnel." The first three were by authors never heard from again, but the latter was an Arthur J. Burks' "dream fantasy." The remaining stories were science fiction by Robert H. Leifried, Jack Williamson, Harl Vincent, and Wallace West. The only one we recall as being of merit is Wallace West's story of the second dimension, "Plane People."

Nat Schachner's "Ancestral Voices" copped Brown's cover on the December, 1933 issue. This story was the first to be termed a "thought-variant," and the idea behind it—although quite original in treatment—can now be considered commonplace when compared to the incredible concept-epics which were to appear in future issues of *Astounding* as "thought-variant" stories. This one told of the time traveler who went back to the year 452 A.D. (just as the Roman Empire was falling to the invading Huns). During the battle, he disposed of a Hun who was his great-grandfather, many times removed. He disappeared, therefore, along with hundreds of thousands of present-day people inasmuch as he (and they) never should have existed because their ancestor was killed before taking a mate.

This story was also a blast at the "ra-

cial purity" myth, because varied indeed are the nationalities of the disappearing contemporary people. Other worthwhile stories in this issue were "Terror Out of Time" by Jack Williamson; "Farewell to Earth" by Donald Wandrei (sequel to "A Race Through Time" which appeared in the October number); and "The Demon of the Flower" by Clark Ashton Smith. In addition to the Smith story, there was but one other non-science-fiction entry, and this issue showed decided improvement over the preceding two. Paul Orban penned several of the interior illustrations, and the remainder were the work of Street & Smith staff artists.

Wonder Stories surprised many by re-adopting the small pulp-size with its November issue, and increasing its pages from 96 to 128. (It had been pulp-size for 12 issues, November 1930 to October 1931, then returned to the large format.) It featured a typical colorful Paul cover, illustrating "The Call of the Mech-Men" by Laurence Manning, the first of the "Stranger Club" series. This one dealt with a strange race of mechanical beings residing in Northern Canada at the location of the magnetic pole. Sidney Patzer's two-part Utopian serial began: "The Lunar Consul." Well remembered is "The End of Tyme" by A. Fedor and Henry Hasse. This was a satire in which a man of the future visits the offices of the editor of (believe it or not) *Future Fiction*. Another outstanding story was "The Man With X-Ray Eyes," by Edmond Hamilton, in which was shown the horror of the possession of senses beyond those of the ordinary mortal. The remaining stories were by Carl Jacobi, J. Harvey Haggard, and James D. Perry, none of which have been selected by present-day anthologists. Although not a word was stated concerning it, the masthead listed Charles D. Hornig as Managing Editor in place of David Lasser. Hornig was hired in this capacity (although only 17 years old) because of the impression the first issue of Hornig's *Fantasy Fan* had made on Hugo Gernsback. Interiors were by Paul, Burian, and Winter.

The December *Wonder* featured another "Earth Guard" story by J. Harvey Haggard, "Evolution Satellite," and this one (a two-part serial) copped Paul's well-done cover painting. (The first of the "Earth Guard" stories appeared in the preceding issue, titled "Through the Einstein Line.") Like the preceding one, this was just fairly good space-opera. "The Inquisition of 6061" by Arthur Frederick Jones (who was never heard from again) told of the era in which the deity had been replaced by Electricity, and the wrath dealt by God himself. This ecclesiastical tale always struck us as being out of place in a magazine so materialistic as was the Gernsback *Wonder*. Clifton B. Kruse made

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his initial entry to the pages of *Wonder* with a future-war story, "The Heat Destroyers;" the tale didn't overwhelm the 1933 s-f clientele. There were other short stories of average interest by Arthur K. Barnes and John Beynon Harris (John Beynon or John Wyndham today), and Sidney Patzer brought "The Lunar Consul" to an end. Represented in "The Reader Speaks" were Festus Pragnell and a youthful Milton A. Rothman. The first two issues of *Wonder* under Charles D. Hornig were quite mediocre—but the majority of the stories had undoubtedly been accepted by his predecessor, David Lasser.

AMAZING STORIES for November (small-size, 144 pages) boasted a good interplanetary-scene Leo Morey cover illustrating the second (and concluding) installment of J. Lewis Burt's super-galactic novel, "When the Universe Shrank." Joe W. Skidmore employed the fourth dimension to project his intrepid time-travellers into the Paleolithic Age in "The Beetle in the Amber." Skidmore, although probably just a name to readers of today, was very popular in the early thirties—primarily because of his "Posi and Nega" series—perhaps the only stories written in which electrons were the "heroes." "The Price of Peace" marked the first appearance of fan Mort Weisinger professionally, and it was an idealistic tale concerning the end of war. There were mediocre tales by Harl Vincent and John W. Campbell, and Edgar Allan Poe's narrative of a 29th century balloon voyage, "Mellonta Tauta," was reprinted. Interiors were (as usual) by Morey, and Forrest J. Ackerman made his regular appearance in "Discussions" along with P. Schuyler Miller, Milton Kaletsky, John B. Michel, Donald A. Wollheim, and Olon F. Wiggins.

The cover story of the December *Amazing* was "Time's Mausoleum" by Neil R. Jones, and was painted by Morey. In this one, Professor Jameson and his immortal metal companions take to time-travelling and study the history of the earth for several millions of years. Professor Jameson was an extremely popular character twenty years ago, and there are many today who would appreciate reading an anthology of this series. Bob Olsen was represented with his clever "The Four Dimensional Escape." This depicted the escape of a condemned man from the gallows via the fourth dimension and how he proved his innocence. Other authors this time were Miles J. Breuer, Otis A. Kline, and Frank K. Kelley—all with run-of-the-mill material. Jules Verne was reprinted again ("The Watch's Soul") and Oswald Train had a lengthy defense of reprints in "Discussions."

In the fan-world the two printed monthlies continued to bring news and articles

to the embryonic fandom. Hornig's *Fantasy Fan* was becoming slanted almost completely to the reader of *Weird Tales*, and the last two issues of 1933 were of little interest to the science fiction fan. The November issue of *Science Fiction Digest*, however, was chock-full of interesting items. There was a biography of Harl Vincent; Ackerman had his "Scientifilm Snapshots"; Francis Flagg wrote about his "Ardathia" series; Nihil (P. Schuyler Miller) continued his devastating satire, "Alicia in Blunderland"; and chapter six of "Cosmos" was by John W. Campbell.

SFD for December led off with a below-par short story by L. A. Eshbach, "The Beast Men." Ackerman appeared with both his scientifilm column (in which he informed his 1933 readers that Paramount was about to produce "When Worlds Collide") and a biography of now-deceased Joe W. Skidmore. The usual news columns by Raymond A. Palmer, Julius Schwartz, and Mort Weisinger were printed and Rae Winters (Rap) wrote Chapter seven of "Cosmos," the colossal interstellar epic. Perhaps this novel by seventeen science fiction writers will someday appear in book form: it certainly can't be inferior to some of the mass-produced volumes being published today.

The issues discussed about brought 1933 to a conclusion. During this year, magazine science fiction reached an all-time low; but it was becoming increasingly evident that the bottom had been touched, and many improvements were in store for the future. 1934 was to be the great "thought-variant" year in *Astounding*, and Charles D. Hornig was soon to inaugurate his "New Plot" requisite for *Wonder Stories*. Old-time readers remember 1934 nostalgically, for it was the year in which some of the most incredible concepts were created, and these stories will be discussed in forthcoming issues.



Good Lord! I never suspected them of being in the race.

. . . SO THEY BAKED A CAKE

by Winston Marks

(illustrated by Tom Beecham)

He was tired of people — a "human interest" columnist, who specializes in glamorizations of the commonplace and sordid is likely to get that way. So . . . this starship seemed to offer the ideal escape from it all.



SURE, I was one of the tough guys who said it would be great, just great, to get away from the boiling mess of humanity that stank up every inhabitable rock on earth.

Not being the Daniel Boone type, this was my private qualification for the job—being fed up to here with people, with the smothering bureaucracy of world government, with restrictions and rationing and synthetic diet supplements and synthetic blondes and mass hypochondria and phony emotions and standing in line to get into a pay toilet.

I hated my profession, trying to wring glamorous interviews out of bewildered heroes and press-agents' darlings and pompous politicians and

snotty millionaires and brave little wronged chorus girls. Their lives were no more glamorous than their readers. They were the same mixture of greed and fear and smelly sweat and deceit and two-bit passion. My particular prostitution was to transform their peccadilloes into virtues, their stubbed toes into tragedies and their fornications into romance. And I'd been at it so long I couldn't stand the odor of my own typewriter.

Of course, I was so thunderstruck at being chosen as one of the 21-man crew for the *Albert E.* that I never got to gloating over it much until we were out in deep space. Yes, it was quite an honor, to say nothing of the pure luck involved. Something like winning the Luna Sweepstakes, only twice as exclusive.

We were the pioneers on the first star-ship, the first to try out the *Larson Drive* in deep space. At last, man's travel would be measured in parsecs, for our destination was 26 trillion miles down near the celestial south pole. Not much more than a parsec—but a parsec, nonetheless.

As a journalist, such distances and the fabulous velocities involved were quite meaningless to me. My appointment as official scribe for the expedition was not based on my galactic know-how, but rather on my reputation as a Nobel-winning columnist, the lucky one out of fifty-six who entered the lottery.

Larson, himself, would keep me supplied with the science data, and I was to chronicle the events from the human interest side as well as recording the technical stuff fed to me.

Actually, I had no intentions of writing a single word. To hell with posterity and the immortality of a race that couldn't read without moving its lips. The square case I had carried aboard so tenderly contained not my portable typewriter, but six bottles of forbidden rye whiskey, and I intended to drink every drop of it myself.

SO, AT LAST we were in space, after weeks of partying, dedications and speech-making and farewell dinners, none of which aroused in me a damned regret for my decision to forsake my generation of fellow-scrabblers.

Yes, we were all warned that, fast as the *Larson Drive* was, it would take us over 42 years, earth-measured time, to reach our destination. Even if we found no planets to explore, turned around and came right back, the roundtrip would consume the lifetimes of even the new babies we left behind. To me this was a perversely comforting thought.

All I wanted to know was how they expected me to live long enough to complete the journey? I could think of pleasanter ways to spend my last days than cooped up in this sardine can with a passel of fish-faced, star-happy scientists.

I was 43 when we departed, which would make me a lucky 90 if I was still wiggling when we hove into our celestial port. But the mathematicians said to relax. Their space-time theory provided, they claimed, a neat device for survival on our high-velocity journey.

The faster a body moves in reference to another, the slower time appears to act on the moving body. If, they said, man could travel at the speed of light, supposedly time would stand still for him. This, I reflected, would mean human immortality—much too good for people.

Anyway, since our average velocity for the trip was planned to come out around a tenth of the speed of light, to us on the *Albert E.*, only about five months would seem to have elapsed for the journey that would consume 42½ years, earth-time.

It seemed to me they were laying a hell of a lot of faith in a theory that we were the first to test out. Our food, water and air-supplies gave us a very small safety margin. With strict ration-

ing we would be self-sufficient for just 12 months.

That left us just two months to fool around looking for a place to sit down. I mentioned this item to Larson on the second day out. I found him at coffee mess sitting alone, staring at his ugly big hairy hands. He was a tall Swede with a slight stoop and the withdrawn manner of a myopic scholar.

As commander of the ship he had the right to keep aloof, but as scribe, I had the privilege of chewing him for information. I said, "Skipper, if it took us generations to discover all the planets in our own little solar system, what do you figure the chances are of our spotting a planet near our goal, in the short time of two months?"

HE WAS silent while I drew my ration of coffee and sugar, then he opened his hands and seemed to find words written on his palms. His eyes never did come up from beneath his shaggy eyebrows. "If they exist," he said slowly, "we might find one. We have better telescopes and our vantage point in space will be superior."

He was a sorry-looking specimen, and I remembered that the fifty-year-old scientist had left behind a youngish wife who adored the ground he walked on. The handsome, blonde woman had stood heroically beside the ramp and watched, dry-eyed, as her husband ascended.

There had been no visible exchange of farewells at the end, as he stood beside me in the air-lock. They just stared into each other's eyes oblivious to all but the maudlin sorrow of their separation.

Then the portal had closed and widowed her, and I had the feeling that Larson was going to tear at the great, threaded door with his bare hands and renounce the whole project. But he just stood there breathing a little heavy and clenching those tremendous hands until it was time to take off. In a way I envied him an emotion that was long

dead in me, dead of the slow corrosive poison of contempt for the whole human race. Dead and pickled in the formaldehyde of ten thousand columns for which the syndicates had paid me nothing but cold money.

Here was a man whose heart could still love, and I hated him for it. I said, "You look like you still have regrets. Maybe this isn't worth your personal sacrifices, after all. If we don't find an inhabitable planet we won't have accomplished much."

"You are wrong," he said quickly. "We have already served our purpose."

"Testing the Drive, you mean?"

He nodded. "This morning in our last radio contact with earth I dispatched the word. The *Larson Drive* is successful. We have passed from our solar system on schedule, and our measurements of ship-objective time check out with the theory—roughly, at least."

He spread his hands out on the table. "This was our primary goal. The expedition ahead is subsidiary. Colonization may result from our exploration, true; but now we have opened the universe."

It was nice to know that things were progressing as planned. I asked, "What do you mean about things checking 'roughly'? Is there some error?"

He nodded and swallowed the dregs from the magnesium cup. "A considerable error, but it's on the safe side. Our velocity checks perfectly, but our estimate of the time-shrinkage factor is so far off that Mr. Einstein's formulae will take some major revision to reconcile what has happened."

"We'll arrive sooner than planned?"

Larson nodded again. "According to shipboard elapsed time we will arrive in the vicinity of our destination in just ninety-two hours from now—a total of 122 hours since take-off. You were worrying earlier about our scanty supplies; this should put your mind at rest."

It didn't displease me. The lack of

privacy on this tin bathtub was even worse than I had anticipated. The news came as sort of a reprieve.

I looked at Larson, and suddenly I knew why the long face. His Tina!

For her, ten years would already have passed, and as we sat there talking, weeks of her existence were fading into oblivion—and Hans Larson was begrudging every second of it. Damned fool, should have stayed at home.

I left him brooding into his empty cup and went forward to the little control dome. One wonderful attribute of the *Larson Drive* was that there was no acceleration discomfort. Gravity was nullified at the outset, and ship's gravity was kept at an comfortable one-half "g".

MAC HULBERT, chief navigator, was alone up there, one foot cocked up on the edge of the broad instrument-board that looked like a cluttered desk-top with handles. He was staring out into the void.

Yes, void! They had said it would be black in space, but not even a glimmer of light showed through the transparent dome. As you looked to the side and back, faint, violent specks seemed to catch at your peripheral vision, but it was impossible to focus on a single heavenly body.

Mac didn't turn or greet me. His face was no longer that of the carefree adventurer with whom I had tied on a fair binge less than a week ago.

"Getting you down, too, Mac?" I asked. He was about the only one aboard I could even tolerate. He wasn't as sour on humanity as I, but he granted me the right to my opinions, which was something.

"God, yes!" he said. "Skipper tell you about the time-error?"

I said, "Yes, but what's there to be sad about? You don't mind that part, do you?" To my knowledge, Mac hadn't left anything behind but his dirty laundry.

Hulbert was in his mid-thirties,

slender, balding and normally as cheerful and stupidly optimistic as they come. Now he looked worse off than Larson.

"Yeah, I mind that," he said kind of resentfully. "I thought we'd have more time to—sort of get used to the idea of—well, outgrowing our generation. But think, by now many of my older buddies will be dead. A dozen World Series will be over. Who knows, maybe there's a war going on back there?"

Of all the morbid nonsense. Yearning for the obituary column, the sports page and the headlines. But then people are rarely sensible when something disturbs their tidy little universe that they take for granted.

It was a little terrifying, though, staring out into that smothering lamp-black. We were moving so fast and living so slowly that even the light-waves from the galaxies toward which we moved had disappeared. We were reversing the "redshift" effect of receding light sources. We approached the stars before us at such a velocity that their light impinged at a rate above the visible violet spectrum.

Mac blurted out, "It will never work out."

"What won't?"

"Colonization. Not at these unholy distances, even if we do find an earth-type planet or two. People won't leave everything behind them like this. I—I feel cut off. Something's gone, everything, everybody we knew back there. It's terrible to consider!"

I SAT DOWN beside him, stared out into the India-ink and faced a few over-due realities myself. Our chances of finding a habitable planet were remote. Finding intelligent life on it was even more unlikely. That such life would resemble men, was so improbable that the odds in favor were virtually nonexistent.

So—what had I really to look forward to? A quick survey of the star-

system in the company of these nincompoop ideo-savants, then a return to a civilization of complete strangers—a culture in which we would all be anachronisms, almost a century behind the times.

A parade of faces began peering at me out of the darkness. There was Bess with the golden hair, and Carol and petite Annette—and Cliff, my red-headed old room-mate who knew how to charcoal-broil a steak—and our bachelor apartment with the battered old teevee set and my collection of books and pipes, and there was my outboard jet up on lovely Lake Vermillion where a man could still catch a fat pike.

What would it be like when we got back? More people, less food, tighter rationing, crowding beyond conception.

Hell!

When the rest of the crew learned of our sharply-revised estimated time of arrival they came down with the same emotional cramps afflicting Larson and Hulbert. It was sickening, a bunch of so-called mature technicians and scientists moping around like a barracks full of drafted rookies, matching miniature billfold photos of cuties that were now approaching crone-hood. The whole venture had become a tragic affair overnight, and for the next few days all thoughts turned backward.

So nobody was remotely prepared for what happened. They were even unprepared to think straight—with their heads instead of their hearts. And Larson was worst of all!

On the last day Larson eased off our 1800-mile-per-second velocity, and as the stars started showing again, shifting from faint violet down into the more cheerful spectrum, spirits aboard began lifting a little.

I WAS IN the control-room with Larson and Mac when we got our first inkling. Mac was fooling with the electronic search gear, sweeping

for planets, when he gave a yip and pointed a jabbing finger at the scope.

"Audio," he stammered. "Look at that!" He lengthened the sweep and the jumble of vertical lines spread out like a picket fence made of rubber.

"A carrier wave with audio modulation," he said with disbelief all over his face.

Larson remained calm. "I hear you, lad. Don't shout." He studied the signal and frowned deeply. "It's faint, but you can get a fix."

As they played with the instruments I looked forward through the green shield that protected us from Alpha C's heavy radiation. Our destination star was now a brilliant blob dominating our piece of heaven. It was a difficult thing to grasp that we had travelled almost 26 trillion miles—in five days, ship's time.

Mac said, "It's a planet, sure enough, but that audio—"

Larson snapped, "Forget the audio! Give me a bearing, and let's be getting on course. That may be the only planet in the system, and I don't want to lose it."

His arms pumped and his big hands pawed at the controls as he brought the inertialess drive into manual manipulations.

For the next few, tense hours we stalked the planet at a discreetly low velocity. When his navigation problem was complete and we were on a slow approach orbit, Mac began playing with the communication rig again.

The ship's intercom was cut in, and we had to chase people out as excitement mounted over our discovery. Finally, when his elbow had been jostled once too often, Larson ordered the control room cleared of all hands but Hulbert and me.

When we were alone Larson said, "This is fantastic."

Mac's face was tied into an amazed scowl, too, as he studied the feeble little patterns on his wave analyzer. "You said it," he breathed. "We've got our-

selves a sweet little earth-type planet, if we can believe the spectro, and unless I'm stark space-happy, there's something or somebody down there beaming a broadcast smack in our direction, following us around like the string on a yo-yo."

"How do you figure that?" Larson wanted to know.

Mac replied, "At this distance the field strength is too strong for anything but a beamed transmission. Mister, *they have us bracketed.*"

Mac swung to the panel on his left and cut in the communication circuit. "It's strong enough to listen to, now. Let's see what kind of gibberish we can wring out of that carrier wave."

He threw a couple of switches and hunted for the exact frequency. A whisper and a rustle of the carrier brushed the speaker. Mac centered in and turned up the volume.

Then even I sucked air. A voice issued from the sound-cone. A man's voice: "—lcome to New Columbia. Welcome, *Albert E.* Come in, please. Welcome to New Columbia. Welcome, *Albert E.* Come in please."

IT REPEATED over and over. Larson let his breath go first with a nervous snort. Mac and Larson both looked at me as if maybe I had something to do with it. Hands trembling, Mac picked up the microphone and reached for the transmitter switch. Larson grabbed the mike from his hand. "Not so fast, dammit!"

"But they know we're up here," Mac protested. "They even know the name of our ship!"

"And our language," I added. I wasn't bored any more.

Larson nodded slowly. "What kind of devilish intelligence have we run into? I need time—to think."

The way he said it sent a cold draught down my spine, and then my imagination started catching up to his. At our rate of approach to the star system, how could any living being

have had time to sense our presence, pick our brains to learn our ship's name, our language, master our method of communication, contrive a transmitter and get on the air?

The magnitude of the accomplishment sent the importance of our little triumph of space travel tumbling into a cocked limbo of insignificance.

For a moment I considered the old curvature of space concept. Could we have somehow doubled back—completing a mystic circle? Was that old Sol up there burning through our green shield? What a laugh that would be! The mental giants of our times backtracking and circling like a tenderfoot lost in the woods on Lake Minnetonka.

Mac cut off the transmitter reluctantly, but he said, "Yeah, I guess I see what you mean, skipper." Larson got to his feet and paced the crowded wedge of space, punching a fist into his other hand with meaty slaps.

He stopped and listened to the soft muttering of the speaker and shook his head. "It makes no sense. It's impossible. Utterly impossible!"

The man's voice from the planet implacably continued repeating the message—no trace of an accent, nothing to suggest an alien origin in its tone, pitch or enunciation.

Perhaps that's what threw Larson so hard. If there had been the faintest taint of other worldliness about it, I think he'd have hauled stakes and gotten us out of there. But the song of the siren was too powerful—the irresistible mental image of a fellow human out here in the bottom of space was salt in the bleeding wounds of Larson's loneliness.

He stared out where the planet must be, some million miles before us. Suddenly the tenseness relaxed from his face and he got the damndest expression of mixed incredulity, hopefulness and sorrow. Tears began welling from his eyes and streaming down the rugged contours of his cheeks.

It didn't add. Nor could I reason a

motive for his laconic command: "Intersection orbit, Mr. Hulbert. We'll take her down," he said quietly. That was all. He hunched over the control board and moved things according to Mac's computations.

SOON I COULD make out the planet. We came in from an obtuse angle with its sun, so it showed first as a crescent of pale, green silver. Then it filled the viewing dome, and Mac began working the homing equipment. "May I acknowledge their message now, skipper?"

Larson shook his head with compressed lips.

"But if we are going in anyway—" Mac argued.

"No!" Larson exploded. Then his voice softened. "I think I know the mystery of the voice," he said. "It must be, it must be! But if it isn't—if I'm wrong—God alone knows. We must chance it. I don't want to know differently—until it's too late."

This was just real great. Larson had some fantastic notion, and he wanted it to be true so damned badly that he was taking us into blind jeopardy when we had the means to probe it first. Real scientific, that.

Humans! Men, and their so-called sense of reason! Larson was a crowning example of the sloppy-hearted thing I was fleeing when I embarked on this joy-ride, and now it would probably be my undoing.

We were homing in on the transmission from "New Columbia", easing down into the atmosphere, and now clouds and land and water formations took shape. The beam led us to the sunlit rim of dawn, and suddenly we were hovering over a great forest, slit at intervals with streaks of glittering blue that looked like deep, wide rivers.

Now Mac touched a switch, and the CW whistle gave us a tight audio beam to follow to the source of the signal. Larson switched to the micro landing controls to ride in like a jet liner on

the Frisco-Shanghai run. We slanted gently down until the forest became trees, and the little blue-green splotches were lush, grassy meadows.

And there was the tower, and the low buildings—and the spaceship!

Something happened to me inside when I saw that. It was a kind of tremolo feeling, like a note in a new symphony, a note that springs free and alone, wavering uncertainly, and you don't know which way it will turn.

In seconds that seemed like hours, we were on the ground, the ramp was jammed out and Larson was blundering down it crying like a baby.

I STOOD in the port breathing the warm air redolent with exotic new scents and yawped like an idiot, trying to make sense of the huge banner strung a hundred yards across one whole side of the little village. The banner read:

WELCOME, HANS! WELCOME
ALBERT E.
WE KNEW YOU WERE COM-
ING, SO—

And near the center of the banner was the largest chocolate cake, or facsimile thereof, in all creation. It must have been ten feet high and twenty feet in diameter.

But Hans Larson wasn't amused by the cosmic gag. He galloped off that gang-plank like a love-sick gorilla. And I'm a comet's uncle if Tina wasn't there, racing out to meet him. Larson had guessed the truth, and no wonder he hadn't had the guts to test it beforehand!

By the time I got down, out and over to where they were all wrapped up mingling tears, I had it pretty well doned out myself.

I don't know why we had figured that all progress and improvement in interstellar flight would cease just because we had left earth. The eternal,
[Turn To Page 57]



The General had an unpleasant vision as he watched this model in operation . . .

Was it a wild talent that MacReedy had, or was it just prophetic genius that led him to figure out new, improved ordnance weapons and make models of them — before the armed forces had them? Which-ever it was, MacReedy was both valuable and dangerous — and when the general saw Mac-Reedy's final figure, the weapons following the mobile rocket A-missile launcher...

THE FINAL FIGURE

Novelet of the Day After Tomorrow

by Sam Merwin, Jr.

(illustrated by Paul Orban)



THE GENERAL was in mufti. He stood briefly within the entrance of *Models and Miniatures, Inc.*, feeling a mild envy of the civilians who brushed past him, coming and going. They looked so easy, so relaxed, so casual in posture and dress. He was wistfully aware of the West Point ramrod that was his spine, the razor-edged bandbox neatness of his banker's grey suit, the Herbert Hoover four-squareness of his homburg, the stiff symmetry of his dark-blue fore-in-hand.

He found compensation in visualizing some of these casual civilians in uniform—then shuddered, and moved on into the shop, poise and assurance restored.

Save for the display-counters and

wall-cases, the shop was softly lighted. And although it was well filled with customers and lookers of all ages there was about it the hushed quality of a library—or a chapel. Even the children talked softly as they pointed at and discussed this 100-gauge English locomotive or that working jet-model of a Vought-Chance *Cutlass*. They were well-aware of being in sight of wish and dream-fulfillment.

He moved slowly toward the rear of the shop, past the glass counters that displayed gaily-painted models of carriages, coaches and early automobiles; past the fire-engines in red and gold; past the railroads; past the planes and past the tiny ships—from Phoenician galleys and Viking vessels with gaudily-decorative sails and shields to the latest bizarre-decked atomic aircraft carrier.

He stood in front of the miniature soldiers and, for a happy moment, re-

captured the glamor of parades and gay uniforms that had beckoned him into a career whose color and band-music had long since been worn off by the nerve-wracking tragedy of battle and the endless ulcerating paper-work of peace.

Busman's holiday, he thought. *Sailors in a rowboat in Central Park*. And he was glad he had not worn his uniform.

Each miniature-soldier manufacturer had a glass shelf to his own wares, labeled with a white-cardboard rectangle upon which his name had been neatly brushed with India ink. Here were the comparatively rude Britains, mass-produced, work-horses of toy armies throughout the Western World since before his own boyhood.

Here were the heavy and magnificent Courtleys, specializing in medieval knights and men-at-arms, beautifully caparisoned in all the colors of the rainbow. Here were the Barker Napoleonics, the one-inch Staddens, the incredible half-inch Emery Penninsulars—each a costly little work of art that defied the enlarging of a magnifying glass. Here were Comets in khaki and grey, perfect models of the guns, tanks and trucks of America, England and Soviet Russia.

To his left along the counter a chunky blond citizen, with wide cheekbones and a faint Slavic accent, was discussing a sale with the clerk. The general was only subconsciously aware of him as he moved in that direction, marveling a little at the painstaking craftsmanship, the endless hours of eye-destroying labor that had produced such microscopic perfection—as well as at some of the follies with which men had attired themselves in the name of martial glory.

He recalled having read of an order, issued at the time of the Mexican War, that the collars of all officers in the United States Army should rise to the tips of the ears. It was scarcely sur-

prising, he thought, that the Seminoles—clad virtually in nothing at all—should have been able to stalemate an army thus uniformed in the steaming swamps of Florida.

"They're great, aren't they?"

The voice came from a lower level, and the General looked down to meet the excited blue eyes of a curly-haired male moppet who could scarcely have been more than twelve. There was an aura of friendliness about the leather-jacketed-and-corduoyed youngster, a sharing of manifest interest, that pierced the hide of the old soldier.

He smiled back and said, "Quite wonderful," and was briefly afraid his words had been too condescending. But the quick answering smile on the youngster's face revealed that he had said the right thing.

He followed the lad's rapt gaze to a shelf he had not yet studied. The name on its cardboard label read *MacReedy* and as soon as he saw the tiny figures it supported, his interest became focused upon it to the exclusion of all other shelves and their fascinating displays.

MacReedy was very evidently a specialist. His subject was American soldiery, with its chief emphasis on artillery—from early Colonial times to the present. As one of the highest-ranking officers in the Ordnance Department of the United States Army, the General's critical interest was aroused.

Here were the demi-culverins of the Manhattan Dutch, the brass field-pieces and mortars of the French wars and the Revolution, the light horse artillery cannon of the Mexican and Civil Wars, along with pear-shaped Dahlgren and Parrot siege-guns, each piece with its crew of aimers, loaders, rammers and ammunition bearers.

Here were the crowbar-like dynamite guns that protected New York and Boston and Baltimore against threatened British invasion during the

Newfoundland fisheries disputes, back in the 1880's; and the complex disappearing cannon that followed them. Here was the old standard three-inch fieldpiece on which the General had cut his own eyeteeth; here the French 75 and 155, long and short, and the mammoth railway guns of World War One. Here was even a model of the postwar American 75—the ill-fated cannon that had proved so accurate on the firing-range, and so utterly useless after a half-mile over a bumpy road.

Here were the weapons of World War two, from M-7 105 self-propelled howitzer to the 240-millimetre tractor-borne cannon. And here were more recent weapons, the 120-millimetre radar-aimed anti-aircraft cannon; its newer automatic 75-millimetre cousin; the new 90-millimetre turret-mount for the Walker Bulldog, the 105-gpf in the turret of its new heavy tank.

THE GENERAL felt a stir of alarm. There had been a leak somewhere; release on this model was not scheduled for another month. He would have to report it, of course. Then he shrugged, inwardly. Leak or not there was small cause for alarm; *They* must long-since have managed to scrounge test-run photographs, if not copies of the blueprints themselves.

Still, a leak was bad business with the country so precariously balanced in a combustible world-situation. He looked at the next weapon, the last in the line.

And froze...

Here was the XT-101, with its rear-mounted turret and twin dual-purpose automatic 75-millimetre cannon. Here was a weapon, complete, that had not been completed in actuality—there was trouble with the turret, of course, there always was...

It couldn't be—but it was. The General discovered that his mouth had slackened in surprise; he closed it firmly. He eyed the turret of the miniature, noted how the automatic range-finding devices, that were causing

trouble at Aberdeen, were incorporated into the turret itself, in a neat armored sheath.

He thought, *Lord! I wonder if that's the answer...* Then he thought that, if it were, the whole world would soon know it.

"A honey, isn't it?" said the curly-headed lad. He added, wistfully, "It costs twelve dollars and eighty-six cents, with tax."

"It's a honey, all right," said the General automatically. Actually, he was appalled—a possibly decisive weapon on sale to all and sundry for twelve dollars and eighty-six cents! Of course the intricate inner workings weren't there. But *They* knew enough about radar and automatic cannon to be able to figure it out from the model.

The General took direct action. He went to the clerk and said, "How many have you?" pointing to the subject of his question.

"Neat—perfect workmanship," said the clerk, donning his selling clothes.

"How many?" the General repeated.

"Only the one in the case left," the clerk replied. "I just sold the last one in stock a moment ago. We've only had four delivered so far."

"I'll take it," said the General in a fever of impatience. He *had* to get it out of public view at once—although he had a sick sensation of already being too late. He recalled the Slavic appearance, the accent of the man who had made the last purchase.

When the clerk had wrapped it up, and he had paid for it, the General asked to see the manager, who proved to be a pleasantly tweedy individual. He produced his card and said, "I'm afraid this man MacReedy has violated security-regulations. Where else is his stuff marketed?"

The manager's expression was not friendly. He said, "Mr. MacReedy's *miniatures* are marketed nowhere else; he has an exclusive contract with us." He evidently resented the General's gruff approach as much as the General

resented not being addressed by title.

Civilians! the General thought. *The damned fools don't understand—they haven't the slightest idea...*

Aloud he said, "Where can I find Mr. MacReedy? I'm afraid I'm going to have to talk to him."

"Uncle Angus? He lives next door. I'm going home now— I can show you."

The General had forgotten the male moppet. He looked down in surprise, then up at the manager, who said, "It's quite true. This is Toby. He helps Mr. MacReedy; he's a collector himself in a small way."

The General took Toby back with him to the hotel. He knew he should be burning up the wires to Washington with news of his horrendous discovery, but somehow he wanted to see it through himself—as far as he was able. Besides, there were certain puzzling facets that would scarcely look plausible in the dehydrated prose of an official report to Security.

It smacked almost of the supernatural. Eyeing his small guest, who was happily and rather messily devouring a piece of French pastry, accompanied by a bottle of ginger-ale—sent up by room service—the General suppressed a chill that rose from his coccyx to his cervical vertebrae.

Like most veteran men of action, the General did not decry the supernatural—such decrying was the property of armchair logicians. In the course of his long career he had seen too many things that defied logic or logical explanation. He said, "Ready to take off, Toby?"

"Yes, sir," said the lad. He was properly impressed with the General's rank—revealed to him by the assistant manager in the lobby. Then, with a sudden shadow of anxiety, "You aren't going to arrest Uncle Angus, are you, sir?"

The General managed a chuckle. No sense in getting the lad scared. "No, I just want to talk to him."

"I'll go with you," the lad offered. "Most grownups have a hard time talking to Uncle Angus. Even dad..." Whatever was his father's problem with the prophetic model-maker remained unstated, as Toby managed to wrap lips and teeth around a large final piece of pastry. He then went to the bathroom to wash his hands before they went downstairs, to where the General's car was waiting.

2



HE SIGHT of the huge olive-drab Cadillac limousine with its two-starred flag and white trimmed and be-fourragered sergeant - chauffeur seemed to awe Toby, who lapsed into mere occasional monosyllables during the drive through the late afternoon to his Long Island home. It was as if, since the General was in mufti, the lad had not quite been able to believe in his reality—until official car and chauffeur offered proof.

This was quite all right with the General, who was desperately trying to rearrange the chaos of his thoughts into some sort of order. He knew he was being dangerously imaginative for a man in his position. But what if this MacReedy actually could foresee the future, at least in its military manifestations?

Granting this impossibility, how could the man be used? The General shuddered at the thought of "selling" anyone with such a gift to the Combined Chiefs of Staff—those quiet-eyed, low-voiced, strictly pragmatic men on whom, perhaps, the future of country and world depended. Even if they by some wild chance accepted the impossibility, he knew full well what would be the tenor of their thoughts—and therefore of their questions.

One of them would be sure to say, "Very well, General, but if we put our planning in the hands of this man—seeking a short route to decisive superiority of armament—how do we know he won't make a mistake, or lead us up the garden path? How do we know he hasn't been planted for this very purpose?"

How did he know? The General decided he didn't. Yet how could any man with such a private power be permitted to exercise his rights of free citizenship? He damned MacReedy, the enemy, the world and himself, and got resettled in his corner of the soft rear seat.

They had left the sun behind them, setting in a dust-pink mist behind the soft-edged towers of Manhattan. By the time they reached Flushing it had begun to snow—big soft flakes whose crystalline dissimilarities were almost visible to the naked eye as they settled against the car windows into wet evanescence. Up ahead the twin windshield-wipers ground them silently and methodically into wet-rimmed circle segments.

"I hope it lasts," said Toby from his window. "I got a sled for Christmas. I haven't been able to use it."

"You'll get your chance," said the General. Damn it, he wondered, what kind of man was Angus MacReedy—if he was a man. Somehow the silent snow, the waning traffic, the oncoming twilight, combined into a sense of ominous portent. It was as if the car were standing still, while a perilous future rushed toward it.

"We turn left at the next traffic light, sir," said Toby.

They turned. They skirted a thinly-settled swampy area on a narrow road, against a background of scrubby pines. The sprawling metropolis might have been on some other continent, some other planet. They met only one car—a long black sedan, that slithered past them on the skiddy road-surface, missing them by inches.

The house where they pulled to a halt at Toby's direction was not large. It had been put up early in the century, and its motif was that of the high-gabled Swiss chalet. Mercifully the snow gave it a touch of quaintness, almost of rightness, despite the absence of lowering alps. Toby pointed to a similar structure about a hundred yards further down the road. "That's where I live," he said.

MacREEDY answered the door. He was a tall, angular man with a long, angular face—from which small blue eyes peered alertly. He wore a grey glen-plaid reefer that was buttoned wrong, a dark blue-flannel shirt and covert slacks that needed a press. He said, "Hello, Toby—you've brought company, I see."

"This is General Wales," said the lad very politely. "General—Uncle Angus."

The General had a ridiculous fugitive memory—"Alice, mutton—mutton, Alice." He shook hands with the model-maker.

"Honored, General," said MacReedy. He ushered them into a living room, whose desk and tables and mantel were literally covered with miniature American soldiery. He said, "Sorry the place is such a mess"—picking up the morning paper from the carpet beside a worn but comfortable-looking easy-chair—"but I wasn't expecting callers. I just had to boot out some sort of a mad Russian."

"What!" The general didn't mean to bark but couldn't help it.

MacReedy grinned quietly and said, "This fellow said he was assistant military attache, or something. Offered me all kinds of money to do some work for him."

"What did he look like?" the General asked.

MacReedy, filling a corn-cob pipe that appeared to be near the close of its short life, paused to say, "Like nothing special—not nearly as distin-

guished as you, General. Blond, chunky fellow with a bit of accent. Not a lot, but enough."

The General exchanged glances with Toby. He knew, without asking, that the boy was thinking the same as himself; it was the man who had bought the XT-101 model in the shop earlier that afternoon.

MacReedy got his pipe going and said through a small blue cloud of smoke, "How does the exhibit look, Toby? Have they got it right?"

"Pretty good, Uncle Angus," said the lad seriously. "They got the Mexican and Black Hawk War units mixed up, but I guess we can't blame them for that."

"I guess we can't," said MacReedy. He turned to the General, added, "Now, sir, what can I do for you? Or need I ask?"

"I have a hunch you know pretty well what I'm after," said the General. "My predecessor must have given you some idea."

"I've been afraid of this," said MacReedy with a sigh. "It's what I deserve for trying to show off to Toby."

"I don't understand," said the General.

"I was trying to show Toby how good I was," he said, ruffling the boy's curly hair. "Then, when I got that seventy-five AA-gun doped out ahead of time—and it proved correct—I had to go one step further. I should never have let the model out of the house."

"I'd like to see your workshop," said the General.

Angus MacReedy removed his pipe and said, "Come along."

THE BASEMENT ran the length and width of the house. Although furnace and fuel-storage were walled off in a separate room at one end it still provided a sizable workroom, enough for three long wooden tables. On one of them MacReedy carved his tiny figures and cannon and vehicle parts from solid chunks of lead. An-

other was used for painting, a third for drying.

On this third table were a half-dozen more of the XT-101's—along with a group of Confederate cannoneers and their field-pieces, some Indians, a small group of knights in armor, and what appeared to be Roman Legionaries.

The General pointed to these and said, "I didn't know you went in for them. I thought you were strictly an American specialist."

MacReedy puffed at his pipe, then said, "I'm doing these for Toby—in return for his services as delivery boy and all-around helper. I'm trying to teach him history in reverse."

"Odd concept," said the General.

"It works—doesn't it, Toby?" MacReedy said to the lad.

"Uncle Angus says it will help me when I take history in college," Toby said stoutly. "This is King Henry the Fifth at Agincourt—just like Sir Lawrence Olivier in the movie. And this is Genghis Khan. And here is Tamerlane, and Charles Martel, and Caesar..."

"I see," said the General. He was a little overwhelmed at so much evidence of one man's individual craftsmanship and industry. He eyed the XT-101's with malevolent interest, then studied a nearly-finished weapon on the carving table. It looked like...

It was! One of the just-conceived, self-reloading rocket-launchers on armored mobile carriage with amphibious tractor-treads. He said, his voice dry and tight, "Where'd you get this, MacReedy?"

MacReedy wandered over to stand beside him. He said, "I didn't *get* it anywhere; it just seems like the logical next step in ordnance, General. I've had pretty good luck in the past, figuring things out this way. I had the Sherman tank plotted back in nineteen-forty—just before I was drafted. I hadn't dared trust my hunches till

I saw my first one two years later at Pine Camp."

"You were in the Army?"

"Six years," said MacReedy. "Two years here in camp and Officer's Candidate School, then two abroad—Sicily, Anzio and the Rhone Valley. I stopped a piece of shell near Lyon, and put in the rest of my time in hospital."

"Rough," said the General though he had neither the time nor the interest for sympathy. "Tell me how you 'figure' these things out. The Sherman tank, if you wish."

MacReedy wagged his head modestly. "It wasn't too difficult, once I'd seen the General Grant. That one obviously wouldn't do; it was too high, needed a full-pivot turret. Yet the basic design was there—anyone who'd thought about it could have done the same. But it was a pleasant shock to learn I'd been right."

"I see," said the General. "And you did the others by the same process—and you're always right?"

"Not always," replied MacReedy. "I fluffed badly on the atomic cannon. I expected a longer barrel for greater muzzle-velocity and range; here, I'll show you." He led the way to a dusty wall shelf where imperfect and broken models crowded together. There was the A-cannon—not as it had appeared, but as the General knew it was going to look in two years, when certain needed changes were made.

He said, "An understandable error. Unfortunately, mobility had to be considered." He paused, looked MacReedy straight in the eye. "I hope you didn't show any of this to your—previous visitor."

MacReedy laughed. "Hardly," he replied. "I'm American, never fear. I'm just one of the lucky few who has been able to make a good living out of my hobby; I have no axes to grind."

"We may have an axe to grind with

you," said the General with a hint of grimace. The rocket-launcher and the improved A-gun were like the one-two punch of a good heavyweight-bitter. He went back to the XT-101, said, "About this twin-mount tank—how'd you figure we'd mount the automatic machinery outside the turret?"

"That wasn't too difficult—if I'm right; and I gather I am," said MacReedy. "There's simply too much stuff to put inside a tank-turret; you've got to mount it outside. And that means plenty of protection, which means an extra armored sleeve. So..."

3



THE GENERAL said, "MacReedy, why are you showing me this? I could be an imposter, a spy."

"With that official limousine?" the model-maker countered. "I doubt it. Besides, Toby vouches for you."

"Risky," said the General.

"Besides," said MacReedy with the suggestion of a smile, "I've seen your picture in *Life* magazine." He paused, added, "After all, in my humble way I'm a bit of an ordnance nut myself."

"I don't believe you," said the General flatly—"I mean about working these things out through logic and guesses. But however you do it, surely you can appreciate that you're much too dangerous to be walking around loose. Especially since *They* know about you. I'm afraid I'm going to have to take you back with me."

"Nothing doing," said MacReedy. "I can take care of myself. Besides, this is my home. I like it here."

"You're being close to treasonable," said the General.

"Not I—you are," came the incredible reply. "You, not I, are attempting

to deny a citizen his rights under the Constitution."

"Damn it, man!" the General backpedaled quickly. "Can't you understand? Suppose *They* got hold of you—*They'd* have you dishing up our innermost secrets to them ahead of time. I don't need to tell you what that could mean in the present world situation."

"You don't, General," said MacReedy. "But I don't think *They'd* get much out of me—much that was useful, I mean. I can't think clearly under drugs or torture; I'd be more of a menace than a help. I explained that to my visitor before you came. He seemed to believe me."

"Maybe *he* did," said the baffled General, "but don't bet on his superiors. You've been an Army officer, MacReedy; I can have you called back into service."

"With a permanent medical discharge?" MacReedy countered.

The General sighed. He knew when he was beaten. He said, "You'll have to stand for a guard then—twenty-four hours. We'll keep them out of sight as much as possible." He wished the whole business were rationally explicable to his own superiors. As it was he knew his hands were tied when it came to drastic action.

"I suppose it's necessary," said MacReedy sadly, but not defiantly; "I should never have tried to show off."

"It's too late for that sort of thing," said the General. "I'm going to have to take some of your models with me—it's too late to do much about the new tank, but I'll have to have the rocket-launcher and the A-gun. And I'll want your promise not to indulge in any more such experiments except as I request."

"That I am glad to give you," said MacReedy and there was no doubting the sincerity of his words.

"I'll pay you for them," offered the General.

"Of course," replied the model-maker; "my name isn't MacReedy for nothing."

As he handed over a couple of hundred dollars the General found himself almost liking the man. *Damn these screwballs*, he thought. He wondered when he was going to wake up and find it hadn't happened. It *couldn't* be happening, any of it. But the perilously-perfect models, of weapons that were yet to be, felt terribly real to his touch.

He said, "Toby, run upstairs and tell Sergeant Riley to come down here and take some stuff out to the car." And, when the boy was gone, "MacReedy, will you do some work for us?"

"Of course," said the other. "A man gets feeling a bit useless making toy soldiers in times like these."

"The pay won't be much..." the General began.

"I can afford it," said MacReedy with the unexpected generosity of the true Scotsman. "What do you want me to do?"

"*They* have a new weapon building," said the General. "All we've got are a few spy-photographs—not very good, I'm afraid."

"What sort of weapon?" the model-maker asked.

"That's just it—we don't know," replied the General. "I'm going to send you what we have on it tomorrow; I'm hoping you can give us a line on its purpose." He paused, added grimly, "As it is we don't know how to meet it. We haven't an inkling. It's given the Chief a whole new patch of grey hairs."

"I'll do what I can," said MacReedy. "But don't expect the moon."

"All I want is the nature and purpose of that weapon—if it *is* a weapon," was the General's reply. Then Toby and Sergeant Riley came clumping down the stairs and the conference was at an end.

Before he left the General gave Toby five dollars. "That's for bring-

ing me here," he told the lad. "You'll be seeing me again."

"Yes, sir," said Toby. He didn't sound at all surprised.

WHEN HE got back in the car alone, the general counted the models on the seat beside him—one rocket-launcher, one A-gun. He said, "Riley, how are we fixed for gas?"

"Pretty good, sir," came the reply. "We can make the city okay, sir."

"Fill up before you get there," the General told him. "We're going right on through to Washington tonight."

"But, sir, I haven't notified the motor pool at Governor's Island," the Sergeant protested.

"Damn the motor pool!" the General exploded. "I'll take care of them. Now get going; we've got a long drive ahead."

The big car gathered speed through the thickening night snow.

The General slept most of the way, after he and the Sergeant stopped for dinner at a Howard Johnson restaurant on Route One, just north of New Brunswick. After a shower, a change into uniform and breakfast, he was in sound operating-shape when he reached his office at the Pentagon the next morning.

He arranged for a round-the-clock guard of Angus MacReedy's house, ordered investigation of the model-maker's record, had a copy of the complete file on the possible enemy weapon forwarded to Long Island by special messenger. Then he summoned a special meeting of top-echelon Ordnance brass and produced the models of the XT-101, the self-reloading rocket launcher and the improved A-gun.

If such a Broadway-Hollywood term as *sensational* could be used in any connection with a Pentagon conference, the General's meeting with his colleagues might have qualified for it. Experts were quick to understand the practicability of the models, quick to recast their plans accordingly.

Within the week, he was summoned before the Combined Chiefs and commended by that body for his clear-sightedness in cutting Gordian knots of the most baffling order. There was talk of a third star and appointment as Chief of Ordnance once the somewhat-doddering incumbent was retired, come June. He was a sort of brown-haired white-haired boy. He was interviewed by representatives of three national newswEEKlies.

Though he wore his new honors gracefully, actually the General was thoroughly uncomfortable. He was far more concerned with the safety of the country than with his own advancement; and his ego was much too solidly-based to permit him enjoyment of honors that were not rightfully his.

The worst of it was that he couldn't explain. If he told his superiors that his "inspirations" came from the intuitive head of a toy-soldier maker on Long Island who even denied his intuition in the name of logic—not only would his own career be permanently damaged, but the value of MacReedy's models would be suspected. So much so that they might be disregarded entirely—thus retying the Gordian knots that were stymying the armament program.

MacReedy's file was laid on his desk one morning by a plump WAC secretary. It was exactly as the model-maker had stated: he was American-born, only child of a Scottish engineer and a German-American woman from Wisconsin. He held an engineering degree from a small polytechnical institute in upstate New York.

His war-record was exemplary. At the time of his wound in Central France, MacReedy had been a captain in the Combat Engineers, wearer of a silver star won at Anzio. There was a complete medical-report on the wound and treatment, whose technical jargon was too much for the General. All he could gather was that it was a head-wound and brain injury, which had

rendered the model-maker unfit for Army duty.

He took the report to his opposite number in the Medical Corps, a man whose abilities in brain-surgery were mentioned in hushed voices at Johns Hopkins. Over a highball he told the whole story for the first time, hoping it wouldn't be received with hoots.

It wasn't. The white-haired surgeon looked long and meditatively at his drink. Then he said, "Kermit, I can't begin to account for it; I have muddled around in the human brain enough to know that what we like to call our scientific knowledge is at best empirical. You say this man had his ability *before* he was wounded?"

"He built a Sherman tank two years before we did," said the General. "Yet he claims the whole process is purely logical."

"Logic!" exclaimed the brain-man with a scorn that matched the General's own on the subject. "Logic is hindsight, Kermit. When our brains, by some intuitive process of progressive thought, reach a desired point, our egos reach backward to give the process a sort of order we call logic. Actually we seldom know how we get where we do; but we're too damned conceited to admit it.

"What in hell do we know about the brain?" he went on. "I knew a perfectly healthy young girl once, who was killed when she was standing beside her horse—the horse sneezed, jerked his head up, and jolted the side of her jaw. Yet back in seventeen eighty-one, when Arnold ordered the massacre at Fort Griswold, one old rebel was bayoneted, had his skull smashed open so that his brains were oozing out on the ground. He recovered and lived for forty years afterward, sane as you please. And they didn't have fellows like me, not then. If they had, he'd probably have died on the operating table."

"In other words you don't know," said the General.

"I don't know, Kermit," replied the other. "Another drink?"

THE NEXT day the international situation showed signs of serious deterioration, and the General took a plane to New York. All the way up he thought of something else the Surgeon-General had said to him—"One thing I have learned. It isn't exactly in my province, but I've run into it enough to make an observation.

"Whenever I've met anyone with what might be called a special gift—psychic or what have you—I've found them scared to death of it. Damned if I know why..."

He ruminated a little before continuing. "You'd think they'd be delighted—but they aren't. They either run to religion, and try to drown it in ritual—or they try to explain it away by some rationalization. Like your friend."

"Then you're willing to accept the fact he has a supernatural gift?" the General asked.

The brain-man shrugged and said, "Supernatural—supernormal—he's got something, if what you tell me is true. Can you think of a better 'ole?"

4



WHEN HE was driven up to the Long Island chalet early that afternoon, the General was pleased to see a command car parked unobtrusively off the road, a sentry sitting in an impromptu sentry-box made of pine bows, that commanded a good view of the approaches. At least, he thought, *They* wouldn't find Mac-Reedy easy to get at. According to the reports he had seen there had been no further attempts.

Toby opened the door. He said, "Hello, General, this is fine. We were going to send you a message tonight."

The General shook hands and said, "Progress?" and, when the boy nodded excitedly, "Why aren't you in school?"

"It's after three o'clock," was the devastating reply, as Toby led him toward the cellar stairs. The General wondered briefly how much he had managed to forget in his fifty-two years.

Angus MacReedy was working at his carving table with a blow-up of the spy-pictures tacked to the cellar wall in front of him, a pile of rough-sketched plans on the table. He rose and said, "I was just doing a little polishing, General. But you hit it about right."

"Good," said the General. "Got it solved?"

"I think so," said the model-maker. "Take a look."

It was an eerie-looking item—a sort of stove-pipe mounted on a disc, surrounded by a flock of flying buttresses. Frowning the General peered at it, then looked at the blow-ups on the walls. From the correct angle, the similarity was ominously unmistakable. He said, "What in hell is it, Captain?"

MacReedy grinned. "Looks weird, doesn't it? It had me stumped for the better part of a week. There's only one thing it could be and that's what it is. Look..."

He picked up a sort of miniature torpedo from the work-table, dropped it down the stove-pipe. The thing worked like a trench-mortar. Some spring in the base of the tube sent the rocket flying in a high arc to smack the opposite wall and drop to the floor.

"It's a mobile rocket-launcher," he said needlessly. "I'd lay odds it can be used for atomic warheads."

"Good Lord!" cried the General. His mind was in a racing turmoil. The problem with the Nazi V-1 and V-2

weapons during World War Two had been the immobility of their launching platforms. If *They* had managed to get around it...

He thought of an insuperable obstacle, said, "But what about backblast? Don't tell me they've found a metal able to stand up under the heat of launching."

"I doubt it," replied MacReedy seriously. "They use this barrel to give her a boost like a trench-mortar shell. My hunch is the rocket doesn't fire until she's well off the ground."

"Is it accurate?" the General asked, thunderstruck.

"Is a trench-mortar accurate?" the model-maker countered. "Ask anybody who's been in Korea."

It was a wallop for the General. Atomic rocket-launchers, mobile rocket-launchers that could function as artillery, could outrange the A-gun perhaps by hundreds of miles. And if the missiles thus fired could be guided—he could see no reason why not—the A-gun was already obsolete.

He sat down on a packing box and mopped his brow although the cellar was far from hot. He said and his voice was unsteady, "Thanks, MacReedy, I think maybe you have done it."

"I think so," said the model-maker. He wasn't boasting, but he was sure of himself. "You want to take it along with you? It should be quite simple to make. I've got a few improvements over *Their* supports, I think."

"If it's the last thing I do," said the General, rising, "I'm going to see you get credit for what you've done."

MacReedy made a gesture of dismissal. "Don't let it bother you, General," he said. "I like my work. Maybe you could arrange for me to make some models for the War College."

"Hell, why not the Smithsonian?" said the General. "Why not both? We ought to have a historical ordnance-exhibit somewhere. And you're the man, no doubt about it."

As he left with the precious model

MacReedy asked, "By the way, General, what do you want me to work on next?"

The General hesitated, then said, "Follow your hunches—logic if you will. Let's see what the next weapon after this one is going to be. You've been ahead of us the rest of the way."

"I'll see what I can do," said MacReedy with his quiet smile. "Let me know how things come out."

"That I will," said the General. Toby walked with him to the car and the General gave him another five dollars. He wished he could do something more for both of them; but at the moment it was out of the question.

IT WAS ALMOST six months before the General got back to the Long Island chalet. Thanks to his now fully-established reputation as an inventive genius, he was able to get a full speed ahead order on the new-type mobile rocket-launcher. MacReedy's improvements were valid, and the Department experts came up with further simplifications. By the time they were ready to go into production they actually had the weapon self-propelled, were well ahead of *Them* on mobility, range and accuracy. It promised to be a military revolution.

Then the General had to make a flying trip around the world—to visit American military installations in Western Europe, in Italy and Spain, in Africa, Formosa, Japan and Korea. He got back to Washington, a thoroughly tired man, and walked into both his promised third star and the Chiefship of the Department. Also into an international situation worse than any since September, 1939—when the Nazis invaded Poland.

They were pushing aggressively in both Europe and Asia, pushing with an arrogance that suggested they felt they could win in a walk if the free nations of the world offered large-scale military defiance. Rumors of a terrible secret weapon were being

bruited about—not only in hush-hush military circles but in the public prints as well. One picture magazine of national circulation had actually published an article stating that *They* had mastered pushbutton warfare.

The General, and the Combined Chiefs made a hurried and secret trip to Aberdeen the day after his return. There, on the proving ground, they watched a big transport-plane land on a makeshift airstrip. They saw a small group of soldiers unload from the plane an odd-looking tractor-mounted weapon that resembled an immense stovepipe with certain refinements.

They saw a lean sausage of a rocket rolled into a door near the base of the tube, watched a trifle nervously while it was elevated almost vertically. An order was barked, a button was pushed—and the rocket rose rapidly from the tube with a dullish report, rose to a height of perhaps a hundred yards.

Then, suddenly, its tail blossomed smoke and flame; it rose with a new lease on life, to disappear into the heavens, leaving a trail of smoke behind it. Pointing to a prefabricated building that stood alone, a mile away, the General said, "Watch that target, gentlemen," and lifted his field glasses to his eyes.

A minute later—fifty-eight seconds was the exact time—the structure was suddenly obliterated by a tremendous explosion. The General sighed and said quietly, "That was TNT. We have a stockpile of atomic weapons ready."

"But the accuracy!" exclaimed a weathered full admiral. "With the wind and the earth's rotation to consider..." He hesitated, then said, "Oh, a guided missile."

The General nodded, and said, "We can put batteries of these new missile-launchers, completely-mobile and with atomic heads, anywhere in the world within twenty-four hours by plane. They have a reasonably effective range of small targets of just over

two hundred miles—with air-guidance, of course, over target. Gentlemen, I think *They* are in for a surprise.”

They got it two days later—in another special test of the new weapon. The General didn't even bother to watch it. His attention was focussed upon a stocky blond man who wore the gaudy shoulder-boards of a lieutenant colonel, and was present as assistant military-attache and qualified observer. His face remained impassive, save for a slight twitch of the lips, when the target was obliterated.

Which was enough to satisfy the General.

DENIED a sure-thing victory *They* were forced to call off *Their* war—with violent internal results. It became quickly evident that *They* were going to be busy for a long time keeping order within their own boundaries. The international situation became easier and happier than at any time since Locarno.

The General, who was due shortly to receive his fourth star, played an active role in the military portion of the peace-making. He had little time even to think of Angus MacReedy and little Toby and the miracle-workroom on Long Island. When he did think of them it was with an inner warmth that was almost devout, with a resolve to see that the model-maker received a satisfactory reward.

Then one morning, while skimming through a stack of reports, a phrase caught his eye. It read—

...and in accord with current fiscal retrenchment-policies, all personnel on special duty were called in for terminal assignments. These included...

The report was from Second District HQ at Governor's Island. With a sinking sensation he scanned the list. There it was—special sentry-detail to guard house of Captain Angus MacReedy (ret). He picked up a tele-

phone and called Governor's Island direct.

Yes, the detail had been withdrawn more than a week earlier... No, there had been no report of trouble... Hold on, there was something in the morning paper...

The General made it in less than two hours. Angus MacReedy had been shot in the back of his head the previous evening, while building model soldiers in his cellar workroom. A boy who lived next door and heard the shot while on his way to pay MacReedy a visit, had seen the murderer drive away in a black sedan. He had given the alarm and local constabulary had picked up the trail and given chase. Ignoring a red light, their quarry had been killed when his sedan was hit by a truck. He had no identification on him but appeared to be a stocky blond man of about forty. An alien pistol, recently discharged, had been found in the wreckage.

The General and Toby stood alone in the strangely empty workroom. Only an ugly, dark stain on the floor remained to mark the recent violence that had occurred there. The General looked at the table, then at the boy. He said, "Toby, do you know what your Uncle Angus was working on recently?" He felt a little ashamed thus to try to pick the brains of a murdered man through a child.

"He'd been pretty busy with orders from the shop," said Toby thoughtfully. "And he'd just finished *that*." He nodded toward an unpainted lead miniature on the work-table.

The General looked at it closely, and felt the blood drain from his face. He had told MacReedy to try to work out the next weapon after the guided-missile launcher...

"Are you sick, General?" Toby asked, breaking in on his abstraction. "You mustn't take it so hard, sir."

"I'm—all right, Toby," he said. "It's been a bit of a shock, that's all."

"It's been horrible," said Toby, his

voice quite steady. "Uncle Angus was a great man. I'll never be able to be as great."

"You'll never know till you try," said the General. He thought that *They* had not forgotten— *They* had killed him for losing *Them Their* war. It was up to him, the General, to see that Angus MacReedy's final prophecy proved false.

Well, he had the power now to carry a little weight—thanks to the murdered man. Standing there in the cellar, the General made a vow to see that during his lifetime the peace was kept, to help set up some sort of organization that would keep the peace when he was gone.

"Will it be okay for me to take this?" Toby had picked up the final figure, and was regarding it reverently.

"What? Oh, I don't see why not." He said goodbye to the boy outside

and got into his car for the drive back to the airfield. Hence, he didn't see Toby place it carefully at the end of hundred yards to his house, didn't see Toby carry the unpainted figure the a row of gay little figures that included Napoleon, Marlborough, Suleiman the Great, Charles XII of Sweden, Henry V, Tamerlaine, Genghis Khan, Charles Martel, Julius Caesar—and newer or perhaps older, figurines of Alexander the Great, Xerxes, Cyrus the Great, Nebuchadnezzar and a trio of even more primitive conquerors.

"Gee," said Toby to himself, "I'm sorry Uncle Angus had to be killed. But if he had to be killed, I'm glad he got my historical set just about finished. I can paint this cave-man myself."

A few minutes later his mother called him to supper.



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**SCIENCE
FICTION
QUARTERLY**

Continued from page 9.

There wasn't room enough for both of us, in spite of the chamber's size, because most of its interior was filled with equipment, but I didn't have to go in to see what had happened there. Latham's remark of the previous moment was all too clear after I'd had a look. An inferno seemed to have raged inside. The heavy-fibred walls were horribly stained and scorched. Most of the glass from the numerous dials and meters had cracked, and some of them had been subjected to such heat that the glass had liquefied and run over the twisted metal rims of the instruments, and then, cooling, had congealed into hair-thin spears that looked, ironically enough, like minute icicles. But as I kept examining the interior, I perceived—and this was perhaps even more incredible—that not everything had suffered, and indeed, some of the things in it seemed to have escaped virtually untouched. Among these was a high, upholstered stool that stood near the blackest wall. The edges of its stuffed seat-cushion had burned, and the lower parts of its legs and rungs were flaked with ashes, but the rest of it was intact. When I realized that the four little circles chalked on the chamber floor marked the original position of the stool, I began to see there was a focus to what had happened in there, and I remarked on it to Wechsman.

Wechsman nodded somberly. "It was a blast."

"From what?"

"It's impossible to say at this point, Mr. Woodruff. You know, we constructed this chamber for Professor Germaine less than six months ago, and I was here for a few days to help install its apparatus, but I'll be darned if I ever laid eyes on maybe a third of it. Naturally, in this condition it's hard to tell much about it, but there's

no doubt in my mind that the professor built a lot of it himself. I imagine you know he used to pride himself on that? Last year—Dr. Purcell was still here, I recall—we sent up a new type of calorimeter and a couple of weeks later in comes a short note from the professor, accompanied by an amazing sheaf of diagrams. He'd rebuilt it and got it hooked up in a way that had our engineers writing him for months afterward." He shook his head sadly. "No question, this tragedy took a genius from our midst."

"What about the stool?" I said.

"He was sitting on it. I'd say sitting, wouldn't you, Sheriff?"

Latham cleared his throat and nodded.

"That accounts for the way it looks," said Wechsman. "Part of it was shielded by the professor's body. That, of course, indicates it was a blast—and just one blast, mind you, because we've tested the ashes and some of this fused glass. Now, you'll notice this back wall was also partly shielded. If we had more light in here, I could show you how clearly the professor's silhouette stands away from the rest of the wall and traces the position he was found in. He was sitting with one leg on the low rung of the stool, both arms over his head—nine or ten inches, I'd say—and his elbows thrusting away from his body. Since this is quite apparently a protective gesture, possibly it signifies the professor's final realization of what was coming. Poor man, it was over in an instant."

"It seems incredible," I said.

Wechsman blinked at me. "Why so?"

"That Germaine's end should have come about through an accident involving his own carelessness."

"I'm not sure I understand, Mr. Woodruff."

"Well, if he could anticipate—"

"Let's save it for the library?" Ferrari broke in, touching my arm by way of apology. "I think Mrs. Howe deserves a place in this discussion, and I'm sure," he smiled, "she'd prefer to tell you her own end herself."

WE SAVED it. Mrs. Howe came out of the kitchen to join us as we entered the library—Latham and Wechsman were along, of course—and we found Doc Berringer and Williams deep in a chess game that went on uninterrupted through most of what followed. I mention this to demonstrate the informal atmosphere Ferrari fostered. Discussion was the word he'd used, and that was what it appeared to be. Writing it down in detail like this makes his direction seem less obscure, but at the time my feeling was that I was being filled in on the background rather painstakingly. If I sensed any hostility in Mrs. Howe's manner when she acquiesced to Ferrari's suggestion to tell her story again, it was soon dissipated.

This, more or less, was her account:

Germaine was in the lab early on Saturday. When he did not appear for lunch at noon, she prepared a tray and left it outside the lab door, as always. But this being the first Saturday of the month, storm or no storm, Mrs. Howe was leaving for her sister's in Twin Falls until Monday morning. Thinking Germaine had forgotten, and that he might very well require something further before she left, Mrs. Howe decided to chance knocking on the lab door. Of course, it was a terrible mistake. She didn't dwell on it, but she didn't have to for me. I'd had my own experiences with Germaine,

and I remembered the time he had told me: "Mr. Woodruff, the first rule of this establishment is silence!" There had almost been froth on his lips. At any rate, Mrs. Howe left shortly afterward.

Monday morning the downstairs tower door was locked. Mrs. Howe assumed Germaine was already in the lab and interpreted the locked door as a continuing rebuke. It made it impossible to take his lunch up to him, but when he didn't come down she merely thought it another of the not infrequent occasions when Germaine's absorption in work made everything else unimportant. When Wechsman arrived during the afternoon, in response to a wire from Germaine last Friday, Mrs. Howe advised him to wait. Hours passed and, naturally, nothing happened. By nine o'clock that night, Wechsman's misgivings were serious enough for him to take it upon himself to rap on the downstairs door. Finally he was making so much noise that it was impossible to doubt Germaine couldn't hear him, and Mrs. Howe called Latham.

And that was all from Mrs. Howe.

Ferrari went on from there. The sheriff, he told me, had used an ax on the door, and the discovery of Germaine's body followed within a few minutes. The county coroner was immediately telephoned. It turned out he was at a convention in Boston. Latham had reached him at his hotel, told him what had happened, and the coroner was presently making his way back to Oakville.

"Of course," Ferrari concluded, "the final disposition of this case will have to wait on the coroner. However, I don't see why our discussion can't undertake to clear up a few details and maybe simplify matters for all concerned."

"But isn't this your investigation?" I said.

"You think I'd get here this fast?" Ferrari smiled. "No, as it happens, I expected to see the professor today on government business. The first I heard of this was late last night when I checked into the Hearthstone Inn. Still," he smiled again, "you might say that I am an interested party—and that I am not acting in any way that exceeds my authority."

"Then you do think it calls for investigation?"

"That's routine."

"Nothing aside from routine?"

"You said yourself it seems incredible it was an accident."

"I was referring to Germaine's habitual great caution."

"Well, sir, when a man of habitual great caution loses his life in an accident, it's worth a look to see that it *was* an accident. Common sense, isn't it? Now, I take it you were familiar with the professor's ways?"

"More or less."

"More?" Ferrari smiled. "Or less?"

"I USED to visit Dr. Purcell," I said. "I've a place of my own near Stowe. Sometimes, summer especially, I'd be around fairly often. By the time Dr. Purcell left here, I'd learned quite a bit about the professor's ways."

"You don't sound as if you liked them particularly?"

"That's not the word," I said. "Does one like a machine?—or not like it? I'd say that Germaine had no understanding, no humor, no pity—but he was also selfless. His existence was only a condition necessary for his work. He was a remarkably efficient machine; one had to understand that. I don't think any of us thought of him as a human being at all."

"Mmmmmmm," said Ferrari. "Not even Dr. Purcell?"

"I don't see the point of that question," I said.

"Then don't answer it." Ferrari smiled.

"Unless perhaps you're not sure I'm qualified to make that sort of generalization," I said, "and I think I am. I considered the three years that George Purcell stuck it out here a monument to his endurance and devotion."

"Devotion," Ferrari repeated. "To the professor?"

"Yes, but more to their work. When Germaine drafted him—"

"Pardon—you said drafted, Mr. Woodruff?"

"Yes. This was in '45. George was in the Naval Reserve but he had been allowed to complete his doctorate and was due to be called in June. Months earlier, Germaine was already with the Navy in Washington, setting up a special research project. He'd been after George to come in, and George had been ducking. Not that he didn't want to—he was actually enthusiastic about it, in spite of the fact that he'd been a student of Germaine's in the graduate school at M. I. T. and knew what to expect—but he'd hoped for at least a short tour of sea duty first. He tried to tell Germaine that a few months of more distant horizons than his notebooks would do him good; that he felt technicians owed the men who used their techniques some first-hand knowledge of their problems. Of course, it was useless on any basis. Germaine filed a bale of requests, the tower went up and George went in. With the war on, he had no alternative. By the time it ended, the work had progressed to a point where he felt he couldn't quit."

"I see," Ferrari nodded. "Still, he did quit. Why?"

"Oh, a million things."

"I'll settle for two or three. Maybe less. Got one?"

"They weren't that significant to me, really."

"Quarrels, I suppose?"

"I see you've been asking," I said.

"A little. What did they quarrel about, say?"

"Anything—who was getting credit for what in certain scientific circles, or whose name was to appear where on an abstract, or that one and not the other had been invited to speak somewhere, or responsibility for publication. One way or another, they managed to be involved a good deal."

"Sort of cog versus the machine?"

"How do you mean that?"

"Dr. Purcell didn't like being pushed into the background," said Ferrari, adding: "Perfectly natural. Don't you agree?"

"I heard it was the other way round," I said. "Only I'd put it that Germaine felt George was altogether too prominently sharing in the foreground."

"You don't think that's the same thing?"

"**N**O. IT IGNORES the question of intent. George was far from unknown in his field when he joined Germaine, and as it became apparent that Germaine's experiments paralleled some of George's earlier work, of course there were inquiries. It was a minor problem during the war, what with the necessity for secrecy, but afterward, when it all got out in a rush, George drew attention and offers from everywhere. Even then he reported them all, until he realized that Germaine interpreted these confidences as taunts. The last argument they had—not that it was more important than a dozen similar ones—

turned on that. Germaine wanted to publish a paper on one phase of their work, and George felt he disagreed enough with what it said not to want his name on it. But as Germaine saw it, George was trying to appear martyred. He accused him of advertising his discontent, to draw more offers to choose among when he got ready to quit."

"And as a result," said Ferrari, "he finally quit. Is that it?"

"Frankly, I don't know what you're after," I said.

"A motive," said Ferrari. "I thought it was clear."

"A motive for what?"

"Murder, possibly. What else?"

"I can't believe you're serious."

"I'm serious," Ferrari nodded. He took a folded sheet of yellow paper from his coat pocket and handed it to me. "I think something like this is serious."

It was the telegram you sent Germaine last week.

"What about it?" I said and gave it back.

He read it out loud: "*Have Just Read Paper Number Eleven Stop Consider It Dangerous Trespass Of My Work Stop Warn You Ccase Adiabatic Experiments Immediately Or Risk Grave Consequences.*" He refolded the sheet and put it away. "According to Mr. Wechsman here," he then went on, "the word adiabatic describes the sort of processes the professor's most recent work concerned—processes that occur without gain or loss of heat. Apparently Dr. Purcell felt that his own work was being trespassed upon. That almost sounds like a motive, and it's followed by a fairly obvious threat."

I said: "I repeat—what about it?"

"You don't think it's important?"

"I think you've got something that

almost sounds like a motive, and something that might be a threat. I never heard of either being fatal to someone three thousand miles away."

The telephone broke in. Ferrari took the desk extension, spoke his name, listened briefly then said, "Right away, thank you," and hung up. He walked out of the room, nodding to Latham on the way, and Latham took his coat and followed.

They disappeared down the hallway toward the porch. Presently both front doors slammed, and a moment later Latham's jeep came to life outside. We listened to the motor fade down the road as if somehow the sound alone might reveal the errand on which Latham had been dispatched. Ferrari returned to wait in the doorway to the library, and it wasn't until the last echoes of the jeep were gone, and our attention returned to him, that he spoke. But he had made the interval too suspenseful; I felt it had been staged, and that Ferrari's manner was that of someone with a carefully planned exit speech to manage. It probably helped me contain my reaction.

Would we, he asked, excuse him for half an hour? And would Mr. Wechsman accompany him, please? And might he prevail upon Mrs. Howe to switch incoming calls to the tower?

Then, as if with an afterthought, he turned to me.

"Mr. Woodruff," he said, "my information places Dr. Purcell in New York Friday night. He arrived on the nine P. M. nonstop Constellation. He registered at the Plaza, stayed overnight, and checked out at ten the next morning. He returned to L. A. on the Sunday midnight flight. That leaves an interim of some thirty-eight hours for which his whereabouts are unknown."

I said: "Well, that's your information."

That ended it. Ferrari looked at me, shrugged and walked out of the room with Wechsman.

I DON'T suppose I have to tell you what it was like to be on the receiving end of that "information". I couldn't remain in the library. Williams and Doc Berringer, with their display of elaborate disinterest in everything but their chessboard, gave me the jitters, and Mrs. Howe—who looked at me as if she had plenty to say but was waiting for me to ask—didn't help matters. The snow was coming down again in tentative flurries, but I had to go out. I walked some of it off, but what could I do with the possibility that Ferrari had told the truth? The idea had no handle. I tried to work on what Ferrari and Wechsman were doing in the tower, and got nowhere—except down to the main road in time to see Latham's jeep returning with a passenger.

The passenger was Dr. Baumes.

He had already gone to the tower when I got back. The sheriff, Berringer and Williams were in the kitchen, where Mrs. Howe was pouring coffee. I joined them silently and listened to Latham's report on Emma Clark's latest matrimonial prospect. A quarter of an hour went by before Wechsman popped his head past the downstairs tower door and nodded to me.

"Stop worrying," he said as we went up. "It's working out."

"I knew it would," I said.

Baumes and Ferrari were standing just beyond the wrecked chamber, and coming towards them I involuntarily glanced through its open door. I saw what Ferrari and Wechsman had been up to. They had carried Germaine's

corpse to the chamber and re-seated it on the high stool inside. The stiff form was still shrouded in its white sheet, and all it required to balance the forward thrust of its upraised arms was provided by a thin wooden lathe stuck between the chamber's front wall and the corpse's chest. I looked away and shook hands with Baumes, and Ferrari took over.

"Mr. Woodruff, it seems that Dr. Purcell left the Plaza to go to Dr. Baumes' home. He was there until he made the return plane." He nodded soberly. "Apparently he didn't know about the weather up here until he got to New York. He'd come to see Germaine, but that changed his plans. He had to be back in L. A. Monday without fail, Dr. Baumes tells me, and with the railroad schedules up here suspended—as they were until late Sunday night—he couldn't risk getting stranded somewhere along the highway. Besides, he had no confidence Germaine would see him if he did make it," said Ferrari, turning to Baumes for endorsement. "He'd phoned from the coast twice, and both calls were refused." At this Baumes gravely wagged his head, and Ferrari went on: "So all Saturday and Sunday, Dr. Purcell called here from Dr. Baumes' home. Of course, there was no answer. Finally he had to leave. Dr. Baumes promised to keep trying to reach the professor.

"Yesterday morning, Mrs. Howe answered. She told Dr. Baumes that the professor was in the laboratory and that she'd tell him of the call at her first opportunity. Dr. Baumes went on trying, however—in the afternoon, again shortly before the tower door was forced—and by the time he made his fourth call, I was here to take it. As I remember it," Ferrari said thoughtfully, looking to Baumes

again, "I didn't tell Dr. Baumes very much. Just a few words that there had been some sort of accident...."

"A very few," Baumes nodded.

"With no details," said Ferrari.

"Correct," said Baumes.

"So that actually," said Ferrari, "the call established nothing beyond the fact that Dr. Baumes was coming as fast as he could. Yet he was so disturbed that he'd no sooner finished talking to me than he put in a call to Dr. Purcell to tell him what he knew. This in spite of the fact that I had identified myself to Dr. Baumes and requested him to say nothing to anyone."

"I have told you there was no alternative," said Baumes.

"But for all you knew, Doctor—"

"My dear sir, for all I knew, Germaine was dead or dying. Surely you do not suppose I had no access to this idea simply because you did not mention it? This is a mistake. Dr. Purcell had already informed me of the dangerous potential in Germaine's experiments. When I heard the word accident, for me it was quite settled that I had to call Purcell immediately. To expect otherwise, my dear sir, is to expect that a man will not spring from a hot stove. A reflex is also authority. One does what one must do."

"**V**ERY INTERESTING," observed Ferrari dryly. "Dr. Baumes has elevated a moral question to a physiological plane. However, this seems to take care of Dr. Purcell's otherwise unaccountable knowledge of the accident here."

"Are you disappointed?" I said.

"On the contrary," said Ferrari, "I'm impressed by Dr. Purcell's foreboding. For someone who hadn't been around in more than a year, he seems to have known a specific hell of a lot

about what was going on up here."

"Have I not made this clear?"

Baumes asked politely.

"No, Doctor. You say Dr. Purcell told you he'd worked along a similar line. You say his telegram to Germaine indicates—as he also told you—how he learned of it, that is, by reading Germaine's Paper Number Eleven, published three weeks ago in *Maillol's Journal*. Is that right, Doctor?"

"Quite right."

"Well, there are several copies of the issue on Germaine's desk. You may have noticed that the Paper itself is dated almost five months ago? Surely Germaine had gone on from there? I think one might reasonably assume as much, but Dr. Purcell's assumption, oddly enough, was that he could still be certain of Germaine's direction—even after five months. As a matter of fact, his urgency would seem to suggest he could almost predict the very week when the danger point would be reached. Strange?" He paused for a possible comment, but there was none. "Perhaps," he resumed, "there was a closer connection between Germaine and Dr. Purcell than we know? Perhaps they corresponded occasionally, exchanged data, and so forth?"

"No, my dear sir," said Baumes, shaking his head.

"What if they did?" I asked.

"Ah," Ferrari brightened, "in that case, you see, Dr. Purcell's apparent clairvoyance has a simple explanation—he knew because Germaine had written him. Reasonable, isn't it? And, quite possibly, Dr. Purcell wrote to the professor about his own progress? Thus, he might have passed on certain information about some of his past experiments that unfortunately—"

I said: "You mean he might purposely have misled—"

"This is really too much," said Dr. Baumes. "Such idle, fantastic speculation offends me. It was I who kept George Purcell advised of Germaine's progress."

"Why?" said Ferrari.

"Because it was clear to me that Germaine was stealing George's work. So you see, my dear sir, how impossible your ideas are. I spent several weekends here during the winter at Germaine's invitation. The professor was freer in his conversation than he would have been had he known I had kept in close touch with George Purcell. It was not long before I was aware the impending great discovery that Germaine slyly hinted at from time to time was largely based on George Purcell's unpublished work. I considered it robbery, an outrage, and I wrote to George. He responded at once. He was immediately alarmed. In this and several following letters he unfolded the experiment's very dangerous potential. During subsequent visits here, I tried again and again to maneuver the conversation so that I could perhaps manage to warn him, but with no success. The one time I seized a rare opportunity, as it seemed, the result was most unfortunate. Germaine acted as if he had caught me trying to open his safe. He broke the conversation off abruptly and I did not see him again until the next day."

Baumes shrugged. "What was I to do? With any other man I would have spoken out plainly—with Germaine it was a worse alternative than silence."

Ferrari said, "You don't think he would have believed you?"

BAUMES slowly shook his head. "My dear sir, I believe that after one minute of such discussion, Ger-

maine could not have been made to listen without resort to physical violence. Your idea, Mr. Ferrari, that George might have been misleading Germaine through correspondence, therefore has some importance, but only because the reverse is true. The danger to Germaine derived from the fact that there was absolutely no means of communication between these two. I was very inadequate as a spy, though," said Baumes with a smile, "I prefer to use the word 'pipeline', which is rather less prejudiced, for I was as prepared to help Germaine in his danger as I was to see that George was not dealt with unjustly. But as matters stood, if I spoke up, even this small usefulness would be at an end. The result, as I said, was that when George read Germaine's paper in *Maillo's* three weeks ago, he made every human effort to warn Germaine and this past weekend flew in from California." Here Baumes paused for a moment, then said, "Yet I will tell you this, Mr. Ferrari. If George had known how imminent Germaine's danger was, I say that somehow he would have managed to get to Germaine in time. George knew that it was close but not so close."

"Stealing," said Ferrari, "it's different when you put it that way."

"I have said it," said Baumes, "and I say now that the only way to understand what has happened here is to telephone Dr. Purcell."

"And do what?" said Ferrari.

"Tell him frankly what has happened. Ask him some questions—there are a half a dozen that have occurred to me. We could go on from there."

"Do you think he would be helpful?" said Ferrari.

"Most helpful," said Baumes.

"All right," said Ferrari, nodding, "except for one thing—I don't want

Dr. Purcell told that Germaine is dead."

"This condition is impossible," said Baumes. "If I cannot describe to him faithfully the state of affairs here, the call is useless."

"You can be as faithful as you like," said Ferrari, "and you can describe anything. Even Germaine."

"But if I tell him of the conditions we have found in the chamber," said Baumes, "he will at once understand that Germaine could not possibly have lived through it."

"Let him understand what he understands," said Ferrari. "Just you don't mention it."

"If he asks me?"

"Then tell him you have been requested not to discuss the subject."

"And if he asks why?" said Baumes. "Shall I tell him about you, too?"

"Suit yourself," said Ferrari. "My being here is no secret."

"And if I do not agree to your condition?"

"Then," said Ferrari, "I will have to forbid the call. Understand me, I have no right to forbid such a call but I will forbid it."

I said, "What you really mean, Mr. Ferrari, is that you will get Sheriff Latham to enforce your decisions."

"Why," said Ferrari, "the Sheriff is free to take advice from any quarter."

Baumes frowned, looked at me and made a futile gesture with his hands. "I will do what I can," he said. "Now if I may have some minutes alone with Mr. Wechsman to assist in the formulation of my question?"

"Take as much time as you need, Doctor," said Ferrari.

WECHSMAN, who had stood by in complete silence, his head moving from side to side during the conversation like a spectator at a tennis

game, now cleared his throat and stated: "I consider it a privilege to be able to help." Then dutifully he followed Baumes farther down the laboratory.

Ferrari and I went into the office. The snow had stopped and it was beginning to grow dark. Far off in the twilight we could see little figures flitting back and forth in front of a bonfire along the shore near the bend.

We talked a little and then Ferrari asked me what I planned to do for dinner. I told him I was sure Mrs. Howe had made all necessary arrangements to take care of the lot of us.

"Is Mrs. Howe a good cook?"

"The best," I said.

Ferrari looked unhappy. "And how is the food at the inn?" he asked.

"Fair," I said. "Just what you'd expect in New England."

"You mean pretty bad, don't you?" said Ferrari with a sigh. "The sacrifices my cultivated palate has to endure, and the requests I sometimes must make really are distressing. Nevertheless, Mr. Woodruff, I would very much like you to have dinner with me this evening at the inn. I want to talk to you about something."

"Something?" I said.

"Something I think you would rather talk about in private than the semi-public audience this house affords."

"We can talk privately and still stay here," I said.

Ferrari hesitated a moment. "Frankly, it's this house," he said. "I'd like to get away from it for a little while. You know the silence here is uncanny. Instead of promoting privacy it destroys it completely. You don't get a feeling like this except in the most public places, museums, auditoriums—you know what I mean?"

I knew what he meant, and I said I'd go to dinner with him.

Soon Wechsman and Baumes came in. They had the questions ready, written by Dr. Baumes on the back of an envelope.

Ferrari didn't ask to see them. He picked up the telephone and spoke official mumbo-jumbo to the operator. Then when he had given your number, he said to us with a smile, "There's another advantage this way, you see. This call is on Uncle Sam."

So if you're trying to correlate what happened here with the calls we made to you, this was it up to our first call.

I wondered what you were thinking when Baumes told you he'd been requested by him not to discuss Germaine, but after that the talking stuck to business and I knew Baumes had been right predicting you'd understand soon enough. I don't know how long the call seemed to you. In the tower it was endless. When it was over, I was surprised to learn it had lasted only twenty-five minutes.

LISTENING to Baumes talk technical jargon, trying to follow what he said, or to understand in some small way the reasons for his occasional moments of excitement, we had created an unbearable tension in the room; I was glad when Baumes finally put the receiver down. Then he said to Ferrari, "It is as I thought—Dr. Purcell understands the tragedy here very well. I have several excellent leads, but to pursue them I am afraid I must have access to Professor Germaine's files." Ferrari said yes at once. By then I knew him well enough to understand that when he made a decision this fast it was because he had thought it out beforehand. Baumes was gratified, but he could not keep from asking, "Then you do trust me, Mr. Ferrari?"

"Yes", said Ferrari, seriously, "and it's all right for Mr. Wechsman too,

as I suppose you're about to ask."

Baumes inclined his head politely. "I was about to ask," he said. "Thank you." Then he added, "I don't quite know what to make of you, Mr. Ferrari."

"With this exchange of compliments," said Ferrari with a smile, "Mr. Woodruff and I will take leave of you gentlemen. We're going down to the inn for dinner."

Baumes looked at me with great surprise, "You, my dear Clyde?" he said. "You are going to miss one of Sarah Howe's dinners?"

"I'm afraid I must," I said.

"It's my doing," said Ferrari gravely. "We have something to talk about."

"But this is the goose in wine sauce," said Baumes. "And a special salad!"

The answer, of course, was still no. Looking beyond Wechsman and out of the office, I could see inside the open chamber where Germaine's shrouded form had tilted on his high stool, leaning forward as if to catch our words. I wondered what he'd have thought if he could hear us now, with his death still a mystery, with the impact of its horrible form still fresh, discussing the goose in wine sauce and the special salad. But Germaine had always leaned away from people. He didn't want to hear them—he didn't want to hear anything.

It would have been more expeditious to do as Ferrari suggested and leave by the tower exit; of course, it was unthinkable and I had to go into the kitchen and make my apologies to Mrs. Howe and the goose. I noticed that Doc Berringer and the Sheriff and Williams were still very much around, with Berringer busily polishing silverware, while Latham and Williams hopped around as nimbly as any chef's assistants. They mourned

our impending absence as little as they did Germaine's.

When we were riding into town in Ferrari's car, he said, "Friendly people here."

"Aren't there everywhere?" I said.

"Yes," said Ferrari, "but it's comforting to keep finding it out." After a while he added, "That Germaine was a strange one, though."

I didn't think the remark called for comment and I didn't say anything. I was greatly relieved. It had begun to look as if Ferrari was over the worst of his suspicions, and the danger of publicity that lay just beneath his probing had passed. I found out how wrong I was during dinner.

UNFORTUNATELY, the inn was hardly the place for privacy tonight. A lot of people from the surrounding countryside came to town just to see if they could make it. McCord's was doing business again, but with the bowling alley and the movie house closed, both McCord's and the inn had an overflow. In addition, if Ferrari's face was not already indelibly etched on the minds of those villagers who made it their business to know who was who and what was what, the federal shield on his car identified him beyond any doubt. Those who had not yet heard of Germaine's death were now so informed, with Ferrari's presence at the inn adding poignancy and drama to the tale. In short, nothing else was discussed while we sat there, and the first half of our meal, cold cuts and warm cider, was consumed in silence at a small table near the crowded bar. But eventually Ferrari had to start talking, and then we more than made up for it.

Ferrari said, "You know, a while back we were speaking of people being the same everywhere? Well,

there're unfriendly ones, too. It seems a pity that in my work one is often as useful as the other, and that the confidences of both must be equally respected. I say this by way of introduction to bring Mrs. Purcell into the discussion," he finished.

"I gathered as much," I said.

"Remember when I told you I was searching for a motive?" said Ferrari. "I didn't want to mention Mrs. Purcell then. Of course, now it seems pointless—because one also needs the means, and from what Dr. Baumes says, Dr. Purcell must be eliminated—but to satisfy my curiosity about motives, I did want to talk to you about it."

"All right," I said.

"I'll tell you what I'm curious about," he said. "It's the relationship between the professor and Dr. Purcell. I heard a good deal about it at the house, but something that never quite came out was the extent of the hostility that existed between them. Nowhere have any of you suggested that at least once they almost came to blows."

"Really?" I said. "If it happened, it's quite possible none of us knows about it. That sort of thing, if it existed, would have been the smallest element in their relationship."

"I don't care how large an element it was," said Ferrari. "I just wanted to know if it existed. After all, dynamite only has to blow up once."

"In other words," I said, "you want to know if there was dynamite in their relationship, and you think the dynamite in this case was Mrs. Purcell?"

"Was she?" said Ferrari. "Now this incident I mentioned where they almost came to blows—I believe that was about Mrs. Purcell? It was about her turning on the radio full blast one day. Does that bring back anything?"

I said, "No one would have done what you say. The entire house had to be in complete silence during the day when the lab was occupied. That went not only for the radio but the telephone, the piano, the doorbell and all but subdued conversations and footfalls. It was never violated."

"I see," said Ferrari.

"But you've reminded me of an argument I did hear something about that concerned Mrs. Purcell and the radio. It was the radio in her car. She had just driven in from town where she'd been shopping for Mrs. Howe. She parked the car in the driveway a moment to run in the back door with her bundles, and forgot to turn off the car radio. It was playing very low and it couldn't be heard two feet—but this was something Germaine happened to see."

"That's an odd way to put it," said Ferrari.

"It was an odd business," I said. "Odd enough, you see, for me to have heard about it. Germaine was standing at the tower window at the time. He looked down into the car and saw the radio dial glowing."

Ferrari shook his head. "And because of that the professor kicked up a fuss?"

"From what I heard," I said, "it was Dr. Purcell who kicked up the fuss. He was absolutely furious when he finally understood what the complaint was about. However, if that's the episode in which they almost came to blows, it's news to me. George would've been ashamed to tell me something like that even if it had happened."

"Wasn't he ashamed to tell you what you do know?" said Ferrari.

"Yes," I said. "I know about it from Mrs. Purcell."

"Mrs. Purcell confided in you?"

"Infrequently. This time she did."

After a moment Ferrari said, "Well that isn't particularly the way I heard it. It's rather too sorrowful a picture of Mrs. Purcell's deprivations in this house. Things weren't always that bad, were they? I mean, not on a seven-day basis?"

"Well, there were the weekends they had visitors," I said.

"I may as well tell you the rest of it," said Ferrari. "I hear Mrs. Purcell used to fill the place with weekend guests who staged minor riots, and that when Germaine objected she took to going to New York—sometimes staying away weeks at a time."

SO I TOLD him about the riotous parties at the house—about how few people had ever come to visit you at all, and never more than three for a weekend; and that Germaine's idea of a debauch was any occasion at which anything stronger than ginger ale was served; and how his further objections had eventually driven away most of your friends—and then I had to tell him why Martha had made those visits to New York, and why she had once remained away for two weeks. It wasn't easy, but I told him.

"Didn't Germaine know?" he asked incredulously.

"Her own husband didn't know," I said. "She never breathed a word of it because she was so afraid of Germaine's reaction. That was why she went all the way to New York for a doctor. She understood what George's work meant to him, and the thought of a baby in this house had frightened her out of her wits. In time it made her so ill that the problem was solved for her. She was in a hospital for two weeks after she lost the baby and she concealed even that. As a matter of fact, she never did tell George and he

found out about it only because of Germaine and his private detectives."

"Germaine and his private detectives?" Ferrari repeated.

"You haven't heard about that, have you?" I said.

"No, Mr. Woodruff, I haven't."

"Then let me add to your store of facts. Germaine hired detectives to follow Mrs. Purcell. After she'd been away those two weeks, he got a report on it. Apparently he was incapable of understanding how a woman could be unselfish enough, or foolish enough, to keep something like that from her husband because she was determined never to interfere with his work. When the report came, Germaine gave it to George without a word of explanation. It all seemed very clear to him. The child wasn't her husband's, and this revelation was to be the end of her and of her marriage that had been a constant thorn in his side."

"And what happened?"

"What do you think happened? You wanted to know what finally broke up the great team of Germaine and Purcell, didn't you? Well, they were out of the same day, and I'll tell you this, Mr. Ferrari—if George Purcell had any murder in him, that was the time for it."

It was the end of our talking. A few minutes later two horse-drawn sleds filled with girls from a nearby college stopped at the inn, and after that it was impossible to hear anything.

When we drove back to the house, Ferrari and I discussed the comparative merits of winter and summer vacations and I congratulated myself on how lightly I'd gotten off, that it could have been far worse.

OF COURSE, reading this letter now, George, you do it knowing that everything has come out right. If

you wonder what there was for me to be afraid of, remember that at the time I really didn't know what was true. The one thing I did know was that Ferrari, in spite of his friendliness and undoubted sincerity, had not for a moment given up on his theory about you, nor would he unless there was another and indisputable solution. I had no faith that there was such a solution. It seemed to me that no matter what was found out about Germaine's death, one could always go on wondering why the accident had happened. Ferrari's tenacity frightened me. It was going to be hard to satisfy him; I hadn't wanted anything to come up that would have made that more difficult.

So there I was congratulating myself as we drove up to the tower, where I found further grounds for optimism. For the coroner had come at last, and he turned out to be a very pleasant and competent and matter-of-fact little man named Doc Sprague. I addressed him as Doctor once and he corrected me. "I don't know if Dr. Baumes knows," he said with a twinkle, "but around here when people call you 'Doctor' it means they don't like you. Now Berringer and I, we're 'Docs'—and up here, so is Baumes. Have you got that straight now, young feller?" I said, "Yes, thank you very much, Dr. Sprague," and everybody laughed.

The coroner's coming had changed things. He had taken over immediately and he was up to his ears in papers with Baumes when we arrived. Baumes and Wechsman's work, he told us, was proceeding with great promise. From what you told Baumes over the phone about the recorder and where it was likely to be, they had not only soon found it, but had been able to remove it.

The big break was the discovery that the inner works were still intact. It was very exciting news. When the coroner, who knew nothing of what Ferrari had been up to, chose to remark that he felt as thrilled as if he were a character in a murder mystery, Ferrari smiled warmly.

Sometime after that, Baumes decided it was too risky to keep working on the recorder without calling you again, and the question arose who, if anyone, was to sanction this call. Ferrari handled it gracefully. He let Doc Sprague make the decision and then he put through the call; meanwhile, of course, he managed to get a thorough explanation of why it was necessary to call you again. The idea of Germaine's having had a wire recorder in the chamber seemed to intrigue him. Baumes had explained that Germaine customarily kept the recorder in operation during the course of an experiment because it preserved his notes and left both his hands free to work. "Was it possible that Germaine had been talking into his recorder during his last experiment?" Ferrari wanted to know. Baumes said both you and he were sure this was the case. It was why he wanted to take no chance of injuring the sealed mechanism.

Well, that was the second call. It sounded like dull stuff, listening to Baumes, but for me there was the added spice of knowing that Ferrari—who had excused himself just before the call went through—was on the extension in the library, listening for something to support a notion that possibly what Baumes and you wanted was to destroy the message.

That was why you were able to talk to me after you had finished with Baumes. When you asked for me, it was up to Doc Sprague to say whether it was all right. Ferrari probably

wouldn't have okayed it, but happening as it did, with him on the extension, he must have been well pleased—which should also explain why I was so noncommittal and why I hastily promised to send a detailed account as soon as I could.

Soon after I put the receiver down, Ferrari returned to the laboratory and stayed there until the end. That was about eleven-thirty, our time.

THERE WERE five of us—Baumes, Wechsman, Ferrari, Doc Sprague and I—in Germaine's office when the first words on the wire became audible. It sent a chill through me to hear Germaine's voice. There was nothing unusual about it. He was whispering as always, making his precise little sounds—words that were often disconnected, the thought joined somewhere in his brain—whispering away, remote and dispassionate. In more ways than one, it did not seem like the voice of a living man.

I wonder how long it will be that whispering will remind me of death.

And yet I know that Germaine had to whisper—while he was in the chamber, at any rate. Dr. Baumes explained it in several ways, so that finally all of us understood it. What I got was the bare outline, but it was enough. I know that the problem both you and Germaine were working on was the conversion of sound waves to heat. I know that Germaine's chamber had already had the experimental successes he published in his Paper Number Eleven. In that paper, Baumes told us, Germaine had shown how he had converted certain sonic wave-lengths to as much as 40 degrees of Fahrenheit. So that Germaine had to whisper, said Baumes, because now that he was working well within the human vocal range, louder sounds would have a ten-

dency to heat the chamber beyond any necessity.

We knew it wasn't just Baumes' reconstruction we were hearing, because there was more than enough on Germaine's wire to substantiate him. Some parts were indistinct, and others garbled, but then there would be long passages of whispering that showed exactly what he had been thinking. Baumes said it leaves no doubt how correct your fears were. When Germaine mentioned the possibility of an enormous acceleration in the process—exactly what you wanted to warn him about—he discounted it completely.

But when it happened, he must have seen the acceleration starting to register from his whispering alone. Since we know the heat generator was on, even the slight rise in his voice at this point must have made the inside of the chamber extremely warm. But he had gone on. The slight rise in his voice turned to subdued, but unmistakable excitement. His words were really broken now, punctuated by very rapid breathing. Over and over we could hear him saying, "Yes, this is right... this is it..." Once, toward the end—I could hardly believe hearing it—he actually commented on the high temperature within the chamber...but certain all the time that he was right...never realizing how fantastic the acceleration of that process was.

The record ends there with a faint ringing sound. Baumes says that ringing is Germaine's last uttered sound. Whatever it was, it must have been quite loud, for it was instantaneously converted into the fearful blast of heat responsible for the blackened corpse that now sat upright again in the chamber.

It was a little past twelve when the coroner finished shaking hands with everyone, announced his complete sat-

isiaction with the findings, and promised to return in the morning to help expedite all legal matters. He gave Wechsman and me a lift down to the inn and after a drink I went up to my room and began writing you this letter.

If I had finished five minutes sooner, this letter would have ended here. It would be sealed and I'd have been lost in sleep four minutes ago. I wouldn't have been able to hear Ferrari's cautious knocking at the door, and this postscript would not have been included.

You see, Ferrari is also staying at the inn, but since he has his own car, it was unnecessary for him to accept Doc Sprague's offer of a lift. I knew he intended to remain at the house as long as Baumes was working on the recorder. He told me so himself, quite frankly, just a few minutes ago when he knocked at my door and came in. If there was any chance that Baumes could get those last words off the wire, he said, he wanted to be there when it happened.

PART OF the point of this postscript is that *it did happen*. There were just two words more. "They were shouted, and that was the end," said Ferrari. "They changed nothing of what we already know."

As far as he was concerned, he would now wait for instructions from Washington pertaining to the disposition of Germaine's papers. He was satisfied, he said.

I laughed and told him *satisfied* was one word I had not expected to hear him use tonight, and I showed him where in this letter I had already written as much to you. "Mr. Ferrari," I said, "this must be a rare occasion in your life. You're a difficult man to satisfy."

"Not unreasonably so, I trust," said Ferrari. "You see, while in some

ways I was at the mercy of scientists and technicians and friends of the deceased—all of whom were more familiar than I with various aspects of the case—I knew a few things too. You can laugh if you like, but to me they kept adding up to a plot. Under the circumstances, my only safe assumption was that in dealing with Dr. Baumes and you, I was dealing with the actual perpetrators of the crime. When you didn't mention that Dr. Purcell's wife, Martha, was known before her marriage as Martha Baumes, the daughter of Dr. Baumes, I thought possibly that was significant. And while I hadn't known about the detectives Germaine hired, I did hear there was another man involved—and that you were the man." I didn't say anything and Ferrari looked at me and shook his head. "It was one reason why I never bothered about your connection with the Purcells. It didn't seem wise to undertake subjects that might make a murderer realize that I was aware he had a motive."

He smiled as he finished, but there wasn't much fun in it for me.

"You know," I said, "I keep wondering who it was told you these things and why."

"Well," said Ferrari, "take a look at me and avoid the fate of a detective."

With that he almost left, but I stopped him at the door. "By the way," I said, "what were those last two words Germaine said?"

"They weren't said," Ferrari corrected me. "It was a shout—'*Got it!*'"

So there's the second part of the point to this postscript. Now we know that the last words uttered by Germaine were not whispered but shouted, and that this—his cry of exultation and triumph—was the very agent of his destruction.

In a few days, he will have a burial at which there will probably be a lot of people present, but there will be no mourners. In time the tower windows will be opened, and the house will grow human again, with unexplained noises and unafraid laughter. How truly ironic it seems to me that for Germaine, who lived unwarmed by human friendship, as emotionless as a machine, the mere kindling of enthusiasm—surely among the happy experi-

ences of most people—was a blaze sufficient to destroy him. He had no experience with warmth either in others or in himself. In this brief exploration of an area of human feeling when warmth finally came to him, it was too much.

With love to Martha,
Your friend,
Clyde

THE END

PICK THE WINNER

FOR THOSE of you who like racing, there's a magnificent race going on up in the ninth magnitude, and all you need to watch it with is a strong telescope.

Twin stars, in the constellation of Cygnus, are racing around each other at 1,500,000 miles an hour. The stars are almost 11,500,000 miles apart, and they completely circle each other in a little less than two days.

Of tremendous size, it is estimated that one star is about 691 times the size of our sun, while the other is 630 times larger. The mass of one is 37.3 that of our own sun, the mass of the other 32.7 times as great. Yet the density of each is only 0.05 that of our sun.

Advice: don't get too close. The temperatures are—
—Sid Seeman

NEW FACE FOR TERRA

By Dee Arlen

ONE DAY in the very far future—a billion years or so—it is very possible that new continents will appear on Earth's surface, dividing the Atlantic and Pacific Oceans into a series of small seas.

The state of Earth at present may well be just a transient step in the evolution from an oceanic stage to one in which the water has been absorbed by the Earth's crust thus turning the planet into a desert, similar to what we believe Mars to be at present.

If the oceans should dry up and their surface levels sink perhaps 20,000 feet, the Atlantic Ocean would probably still retain its S-shape, but a new continent would appear along its whole length, dividing it into two Atlantic seas.

Hot And Cold Bats By Omar Booth

NATURE DID much better for the bat than she did for man. At least in one respect. While the human being is dependent on outside sources for his temperature comfort, the bat carries his own automatic heating and cooling system right with him, as part of his body.

This nocturnal flying mammal is sensitive to cold. He becomes lethargic when he gets cold, and eventually will die. By shivering, he is able to raise his body temperature to a point sufficiently high for him to gain enough momentum for locomotion. This is like the motor of a car warming up before it starts.

When flying in hot weather, the bat produces a great excess of heat. But there's a radiator-like mechanism in the wings which acts as a cooling device.

No Two Alike

AS FINGERPRINTS are never the same, so no two faces ever duplicate each other, even those of identical twins. There is always some slight characteristic in which they differ.

And the ugly little towhead will never grow into the glamorous beauty queen. Never, that is if she is really strictly ugly. Because while it grows in size, the human face carries the same proportions throughout the lifetime. An overdeveloped nose or jaw will stop growing while the rest of the face catches up with it, but that's the only way in which the appearance of the face will change. Unless, of course, the plastic surgeon steps in.

—Roy Small

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...SO THEY BAKED A CAKE

colossal conceit of men, I guess.

When our last signal back to earth had given the okay sign, sure, they started building bigger ships and recruiting another crew. But by the time that the *Albert E. II*, was ready to take off for a more extended expedition, the *Larson Drive* was now the *Larson-McKendrick Drive*, with a velocity of a full half the speed of light, some five times our velocity.

Somehow, Tina had managed to get herself in the party, as Hans had sensed she would. And the time-differential, as it worked out, wasn't serious at all. Tina had been only 32 when we left her on earth. Including the year and a half she had already been with the colony on New Columbia, she was still quite a bit younger than Hans, and just twice as pretty as the day of their separation.

The tremolo note was rising now, the soft, mystic pitch of excitement inherent in the new world.

I turned to Mac, who was grinning like to split his face. I said, "Looks like you were wrong, old boy—about the impossibility of colonizing."

He nodded his head readily, but he wouldn't tear his eyes away from that monstrous, preposterous chocolate cake. The attraction, I discovered, was a little bevy of on-lookers who stood at its base. They were a dozen or more most attractive colonists in the younger age-bracket and unmistakably of the opposite sex.

Mac said. "Yeah, I was wrong about colonizing prospects. Dead wrong. Aren't you glad?"

And now the tremolo feeling split into a crescendo of sub-harmonics and overtones, a magnificent chord of attunement with life and humanity, everywhere in the universe. And all at once I knew *I was glad*, happy as hell to see these people from the old hometown of earth.





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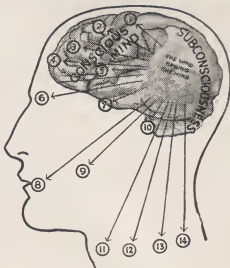
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You cannot control these impulses—to attempt to fight them by direct effort only serves to increase their strength—but “you can remove them altogether by eradicating from your Subconscious Mind the trouble from which they spring, building up in their place powerful positive impulses, generating forces within yourself which will help instead of hinder, which will carry you forward towards a happier, healthier, fuller, more successful life.” This you can do—yourself—simply by your own efforts, in the privacy of your own home.



Key to imaginary diagram depicting the effect of the subconscious mind on the personality and bodily structure.

- | | |
|---|----------------------------------|
| 1 Self consciousness
Lack of self-confidence | 6 Unsteady gaze
Shifting eyes |
| 2 Unsociability
Nervous
Apprehension
Anxiety | 7 Nervous
Catarrh |
| 3 Depression
Worry
Sleeplessness
Nerves | 8 Stammering |
| 4 Weak will
Indecision
Habits | 9 Blushing |
| 5 Forgetfulness
Lack of
Concentration | 10 Obsessions |
| | 11 Trembling
limbs |
| | 12 Neurasthenia
Nerve pains |
| | 13 Functional
disorders |
| | 14 Physical
lethargy |

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